

# TITLE 355

## STATE CHEMIST OF THE STATE OF INDIANA

- Art. 1. PLANT INOCULANTS AND GROWTH STIMULANTS (*EXPIRED*)
- Art. 2. COMMERCIAL FERTILIZERS
- Art. 3. AGRICULTURAL AMMONIA
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### ARTICLE 1. PLANT INOCULANTS AND GROWTH STIMULANTS (*EXPIRED*)

(*Expired under IC 4-22-2.5, effective January 1, 2002.*)

### ARTICLE 2. COMMERCIAL FERTILIZERS

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#### Rule 1. General Provisions

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- 355 IAC 2-1-7 Pesticides in fertilizers; registration and guarantee

#### 355 IAC 2-1-1 Degree of fineness of unacidulated phosphate materials; registration and labeling

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-4; IC 15-3-3-5

Sec. 1. Degree of Fineness of Unacidulated Phosphatic Materials. Rock phosphate, soft phosphate with colloidal clay, basic slag and other materials, the availability of which is related to particle size, shall be registered and labeled as to the percentage that will pass U. S. Standard Sieve Series Number 100 (100 mesh, dry sieve method). Sec. 4a [IC 15-3-3-4(a)]. (*State Chemist of the State of Indiana; Fertilizer Law Rule 1; filed Sep 14, 1953, 7:00 am: Rules and Regs. 1954, p. 6; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

#### 355 IAC 2-1-2 Official methods of sampling and analysis

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-7

Sec. 2. The methods of sampling and analysis shall be those adopted by AOAC International in all cases where methods have been adopted by AOAC International. In cases not covered by such methods, or in cases where methods are available in which improved applicability has been demonstrated, the state chemist may adopt such appropriate methods from other sources. (*State Chemist of the State of Indiana; Fertilizer Law Rule 2; filed Sep 14, 1953, 7:00 a.m.: Rules and Regs. 1954, p. 6; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1388, eff one hundred twenty (120) days after filing with secretary of state; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3359, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

#### 355 IAC 2-1-3 Printed matter conflicting with required labeling; prohibition

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-5

Sec. 3. No printed or written matter or design of any kind shall be attached to, or appear on, or be associated with commercial fertilizer which conflicts with the information described in IC 15-3-3-5. (*State Chemist of the State of Indiana; Fertilizer Law Rule 3; filed Sep 14, 1953, 7:00 a.m.: Rules and Regs. 1954, p. 6; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1388, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

#### 355 IAC 2-1-4 Weight denominations of official tags or labels; minimum order (*Repealed*)

Sec. 4. (*Repealed by State Chemist of the State of Indiana; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1400, eff one hundred twenty (120) days after filing with secretary of state*)

#### 355 IAC 2-1-5 Additional plant nutrients; registration and guarantee; warning on label

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-4; IC 15-3-3-5

Sec. 5. (a) Additional plant nutrients besides nitrogen (N), phosphate (P<sub>2</sub>O<sub>5</sub>), and soluble potash (K<sub>2</sub>O), when mentioned or claimed on the:

- (1) tag or label;
- (2) container; or
- (3) written or printed statement that accompanies delivery;

shall be registered and guaranteed. Guarantees shall be made on the elemental basis. Sources of the elements guaranteed shall be shown on the application for registration.

(b) When claims for such nutrients are made on the label, container, or application for registration, the minimum percentages that will be accepted for registration are as follows:

Element	Percentage
Calcium (Ca)	1.00
Magnesium (Mg)	0.50
Sulfur (S)	1.00
Boron (B)	0.02
Chlorine (Cl)	0.10
Cobalt (Co)	0.0005
Copper (Cu)	0.05
Iron (Fe)	0.10
Manganese (Mn)	0.05
Molybdenum (Mo)	0.0005
Sodium (Na)	0.10
Zinc (Zn)	0.05

(c) Guarantees or claims for the additional plant nutrients listed in subsection (b) are the only ones that will be accepted. Proposed labels and directions for use of the fertilizer shall be furnished with the application for registration upon request. Warning or caution statements are required on the label for any product that contains three-hundredths percent (0.03%) or more of boron in a water-soluble form or one-thousandth percent (0.001%) or more of molybdenum. Any of the elements listed in subsection (b) that are guaranteed shall appear in the order listed, immediately following guarantees for the primary nutrients, nitrogen, phosphorus, and potassium. (*State Chemist of the State of Indiana; Fertilizer Law Rule 5; filed Sep 14, 1953, 7:00 a.m.: Rules and Regs. 1954, p. 7; filed Aug 15, 1958, 12:00 p.m.: Rules and Regs. 1959, p. 4; filed Oct 6, 1961, 3:45 p.m.: Rules and Regs. 1962, p. 76; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3359, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

### 355 IAC 2-1-6 Boron-containing fertilizers; warning requirements

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-4; IC 15-3-3-5

Sec. 6. When any compound of boron is incorporated in a commercial fertilizer, a special warning tag or

statement must be furnished to the purchaser and shall contain the following:

- (1) The word "WARNING" in letters at least one (1) inch in height.
- (2) A statement describing the crops for which the fertilizer is to be used.

(3) A statement declaring use of the fertilizer on any other crops or under conditions other than those recommended may result in serious injury to the crops. The tag or statement must be attached to or printed on the bag or other container in which the fertilizer is sold; for bulk fertilizers, the statement must be placed on the invoice or other document that shall accompany delivery and be supplied to the purchaser at the time of delivery as provided in IC 15-3-3-5(b). (*State Chemist of the State of Indiana; Fertilizer Law Rule 6; filed Sep 14, 1953, 7:00 a.m.: Rules and Regs. 1954, p. 7; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3360, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

### 355 IAC 2-1-7 Pesticides in fertilizers; registration and guarantee

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-4; IC 15-3-3-5

Sec. 7. Pesticides in Fertilizers. When an insecticide, herbicide, or any other additive for pest control is added to fertilizer the product must be registered and guaranteed with respect to the kind and percentage of each of these additives as well as with respect to plant food elements. In a prominent manner the label on the package shall state the crops for which the fertilizer is to be used and shall state that the use of the fertilizer on any other crops or under conditions other than those recommended may result in serious injury to crops. (*State Chemist of the State of Indiana; Fertilizer Law Rule 7; filed Sep 14, 1953, 7:00 am: Rules and Regs. 1954, p. 7; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

#### Rule 2. Definitions

355 IAC 2-2-1	"Approved" defined
355 IAC 2-2-2	"Aqua ammonia" defined
355 IAC 2-2-3	"Discharge" defined
355 IAC 2-2-4	"Dry bulk fertilizer" defined
355 IAC 2-2-5	"Elephant ring" defined
355 IAC 2-2-5.5	"Facility" defined
355 IAC 2-2-6	"Field operations" defined
355 IAC 2-2-7	"Fluid bulk fertilizer" defined
355 IAC 2-2-8	"Fluid fertilizer" defined
355 IAC 2-2-9	"Low pressure nitrogen solutions" defined
355 IAC 2-2-10	"Operational area" defined
355 IAC 2-2-11	"Operational area containment" defined
355 IAC 2-2-12	"Primary containment" defined

- 355 IAC 2-2-13 "Secondary containment" defined  
 355 IAC 2-2-13.5 "Spill" defined  
 355 IAC 2-2-14 "State chemist" defined  
 355 IAC 2-2-15 "Storage container" defined  
 355 IAC 2-2-16 "Storage facility" defined  
 355 IAC 2-2-17 "Storage facility location registry" defined

**355 IAC 2-2-1 "Approved" defined**

Authority: IC 15-3-3-12  
 Affected: IC 15-3-3-7

Sec. 1. As used in this article, "approved" means approval by the Indiana state chemist or his agent except where otherwise stated. (*State Chemist of the State of Indiana; 355 IAC 2-2-1; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1389, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

**355 IAC 2-2-2 "Aqua ammonia" defined**

Authority: IC 15-3-3-12  
 Affected: IC 15-3-3-7

Sec. 2. As used in this article, "aqua ammonia" means an aqueous solution of anhydrous ammonia generally containing from eighteen (18) to thirty (30) percent of ammonia (NH<sub>3</sub>) by weight and having a vapor pressure usually varying from zero (0) to ten (10) pounds per square inch gauge (psig) at one hundred four degrees Fahrenheit (104°F). (*State Chemist of the State of Indiana; 355 IAC 2-2-2; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1389, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

**355 IAC 2-2-3 "Discharge" defined**

Authority: IC 15-3-3-12  
 Affected: IC 15-3-3-7

Sec. 3. As used in this article, "discharge" means a release of fluid or dry bulk fertilizer into either a secondary containment or operational containment area at a storage facility. (*State Chemist of the State of Indiana; 355 IAC 2-2-3; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1389, eff one hundred twenty (120) days after filing with secretary of state; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3360, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

**355 IAC 2-2-4 "Dry bulk fertilizer" defined**

Authority: IC 15-3-3-12  
 Affected: IC 15-3-3-7

Sec. 4. As used in this article, "dry bulk fertilizer"

means nonfluid commercial fertilizer in an undivided quantity exceeding two hundred (200) pounds. (*State Chemist of the State of Indiana; 355 IAC 2-2-4; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1389, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

**355 IAC 2-2-5 "Elephant ring" defined**

Authority: IC 15-3-3-12  
 Affected: IC 15-3-3-7

Sec. 5. As used in this article, "elephant ring" means a storage container with open top serving as a secondary containment vessel into which a smaller primary storage container is placed. (*State Chemist of the State of Indiana; 355 IAC 2-2-5; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1389, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

**355 IAC 2-2-5.5 "Facility" defined**

Authority: IC 15-3-3-12  
 Affected: IC 15-3-3-7

Sec. 5.5. As used in this article, "facility" means all land, buildings, equipment, structures, and other stationary items that are located on a single site or on contiguous sites and that are owned or operated by the same person or by any person who controls, is controlled by, or is under common control with such person. (*State Chemist of the State of Indiana; 355 IAC 2-2-5.5; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3360, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

**355 IAC 2-2-6 "Field operations" defined**

Authority: IC 15-3-3-12  
 Affected: IC 15-3-3-7

Sec. 6. As used in this article, "field operations" means the application of bulk fluid fertilizer to soil or plants in the course of normal agricultural or horticultural practice. (*State Chemist of the State of Indiana; 355 IAC 2-2-6; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1389, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

**355 IAC 2-2-7 "Fluid bulk fertilizer" defined**

Authority: IC 15-3-3-12  
 Affected: IC 15-3-3-7

Sec. 7. As used in this article, "fluid bulk fertilizer" means fluid fertilizer in an undivided quantity exceeding

fifty-five (55) U.S. gallons. (*State Chemist of the State of Indiana*; 355 IAC 2-2-7; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1389, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822)

### **355 IAC 2-2-8 “Fluid fertilizer” defined**

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-7

Sec. 8. As used in this article, “fluid fertilizer” means commercial fertilizer in liquid form and includes solutions, emulsions, suspensions, and slurries. “Fluid fertilizer” does not include anhydrous ammonia. (*State Chemist of the State of Indiana*; 355 IAC 2-2-8; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1389, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822)

### **355 IAC 2-2-9 “Low pressure nitrogen solutions” defined**

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-7

Sec. 9. As used in this article, “low pressure nitrogen solutions” means an aqueous solution of ammonium nitrate and/or urea and/or other nitrogen carriers, containing various quantities of free ammonia exceeding two percent (2%) by weight. Aqua ammonia and nonpressure nitrogen solutions commonly referred to as twenty-eight percent (28%), thirty percent (30%), or thirty-two percent (32%) nitrogen solutions are excluded from this definition. (*State Chemist of the State of Indiana*; 355 IAC 2-2-9; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1390, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822)

### **355 IAC 2-2-10 “Operational area” defined**

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-7

Sec. 10. As used in this article, “operational area” means an area or areas at a fluid bulk fertilizer storage facility where fertilizers are transferred, loaded, unloaded, mixed, or where fertilizers are cleaned or washed from containers, or application, storage, or transportation equipment. (*State Chemist of the State of Indiana*; 355 IAC 2-2-10; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1390, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822)

### **355 IAC 2-2-11 “Operational area containment” defined**

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-7

Sec. 11. As used in this article, “operational area containment” means any structure or system designed and constructed to effectively intercept and contain discharges, including container or equipment wash water and rainwater, and to prevent run-off or leaching from a storage facility. (*State Chemist of the State of Indiana*; 355 IAC 2-2-11; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1390, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822)

### **355 IAC 2-2-12 “Primary containment” defined**

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-7

Sec. 12. As used in this article, “primary containment” means the storage of fluid bulk fertilizer in storage containers at a storage facility. (*State Chemist of the State of Indiana*; 355 IAC 2-2-12; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1390, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822)

### **355 IAC 2-2-13 “Secondary containment” defined**

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-7

Sec. 13. As used in this article, “secondary containment” means any structure, including dikes, used to contain product spills from bulk storage containers and prevent run-off or leaching. (*State Chemist of the State of Indiana*; 355 IAC 2-2-13; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1390, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822)

### **355 IAC 2-2-13.5 “Spill” defined**

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-7

Sec. 13.5. As used in this article, “spill” means any unexpected, unintended, abnormal, or unapproved liquid or dry dumping, leakage, drainage, seepage, or other loss of fertilizer. The term does not include releases to impermeable surfaces when the fertilizer does not migrate off the surface or penetrate the surface and enter the soil. (*State Chemist of the State of Indiana*; 355 IAC 2-2-13.5; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3360, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822)

**355 IAC 2-2-14 “State chemist” defined****Authority:** IC 15-3-3-12**Affected:** IC 15-3-3-7

Sec. 14. As used in this article, “state chemist” means the Indiana state chemist or his appointed agent. (*State Chemist of the State of Indiana*; 355 IAC 2-2-14; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1390, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822)

**355 IAC 2-2-15 “Storage container” defined****Authority:** IC 15-3-3-12**Affected:** IC 15-3-3-7

Sec. 15. (a) As used in this article, “storage container” means the following:

(1) A container used for the storage of fluid bulk fertilizer.

(2) A rail car, nurse tank, or other mobile container used for the storage of fluid bulk fertilizer.

(b) “Storage container” does not include the following:

(1) A mobile container storing fluid bulk fertilizer at a storage facility for less than fifteen (15) days, if this storage is incidental to the loading or unloading of a storage container at the storage facility.

(2) A mobile container located other than on property owned, operated, or controlled by an owner or operator of a storage facility.

(3) A container used solely for emergency storage of leaking fertilizer containers that are fifty-five (55) gallons or smaller.

(*State Chemist of the State of Indiana*; 355 IAC 2-2-15; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1390, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822)

**355 IAC 2-2-16 “Storage facility” defined****Authority:** IC 15-3-3-12**Affected:** IC 15-3-3-7

Sec. 16. As used in this article, “storage facility” means a location at which:

(1) fluid bulk fertilizer in undivided quantities in excess of:

(A) two thousand five hundred (2,500) gallons; or

(B) seven thousand five hundred (7,500) gallons total (3 × 2,500 gallon vessels); or

(2) dry bulk fertilizer in undivided quantities exceeding twelve (12) tons;

is held in storage. (*State Chemist of the State of Indiana*; 355 IAC 2-2-16; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1390, eff one hundred twenty (120) days after filing with

*secretary of state*; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3360, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822)

**355 IAC 2-2-17 “Storage facility location registry” defined****Authority:** IC 15-3-3-12**Affected:** IC 15-3-3-7

Sec. 17. As used in this article, “storage facility location registry” means the annual listing of all fluid bulk fertilizer and/or dry bulk fertilizer storage facilities in Indiana by the state chemist as derived from written notification of such storage facility location by the facility's owner, operator, or person in charge. (*State Chemist of the State of Indiana*; 355 IAC 2-2-17; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1391, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822)

**Rule 3. Primary Containment of Fluid Bulk Fertilizer at Storage Facilities**

355 IAC 2-3-1	Storage containers and appurtenances; general
355 IAC 2-3-2	Prohibition against underground storage; exemptions
355 IAC 2-3-3	Abandoned containers
355 IAC 2-3-4	Prohibited materials
355 IAC 2-3-5	Anchoring storage containers
355 IAC 2-3-6	Security
355 IAC 2-3-7	Filling storage containers
355 IAC 2-3-8	Pipes and fittings
355 IAC 2-3-9	Liquid level gauging device
355 IAC 2-3-10	Labeling of storage containers
355 IAC 2-3-11	Inspection and maintenance
355 IAC 2-3-12	Compliance with effective date of rule

**355 IAC 2-3-1 Storage containers and appurtenances; general****Authority:** IC 15-3-3-12**Affected:** IC 15-3-3-7

Sec. 1. (a) Storage containers and appurtenances shall be constructed, installed, and maintained so as to prevent the discharge or spill of fluid fertilizer.

(b) Storage containers and appurtenances shall be constructed of materials which are resistant to corrosion, puncture, or cracking.

(c) Materials used in the construction or repair of storage containers and appurtenances may not be of a type that react chemically or electrolytically with stored fluid fertilizer in a way that may weaken the storage container or appurtenances or create a risk of discharge or spill.

(d) Metals used for valves, fittings, and repairs on metal containers shall be compatible with the metals used in the construction of the storage container so that the combination of metals does not cause or increase corrosion that may weaken the storage container or its appurtenances or create a risk of discharge or spill.

(e) Storage containers and appurtenances shall be designed to handle all operating stresses, taking into account static head, pressure build-up from pumps and compressors, and any other mechanical stresses to which the storage containers and appurtenances may be subject in the foreseeable course of operations. (*State Chemist of the State of Indiana; 355 IAC 2-3-1; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1391, eff one hundred twenty (120) days after filing with secretary of state; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3361, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

### **355 IAC 2-3-2 Prohibition against underground storage; exemptions**

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-7

Sec. 2. No person shall store fluid fertilizer in an underground or lined pit storage container. This prohibition does not apply to the following:

- (1) A watertight catch basin used for the temporary collection of run-off or rinsate from transfer and loading areas.
- (2) Storage in a "316" or "317" stainless steel storage container, or in another approved container, if the storage container is enclosed within an approved liner and an approved program of ground water monitoring to detect leakage is established.

(*State Chemist of the State of Indiana; 355 IAC 2-3-2; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1391, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

### **355 IAC 2-3-3 Abandoned containers**

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-7

Sec. 3. (a) Storage containers and other containers used at a storage facility to hold liquid bulk fertilizer or fertilizer rinsate are considered abandoned if they have been out of service for more than six (6) months because of a weakness or leak or have been out of service for any reason for more than two (2) years.

(b) Abandoned underground containers, including abandoned underground catch basins, shall be thoroughly

cleaned and removed from the ground or thoroughly cleaned and filled with an inert solid. All connections and vents shall be disconnected and sealed. A record of the catch basin size, location, and method of closing shall be maintained at the storage facility or as otherwise provided for in this article.

(c) Abandoned aboveground containers shall be thoroughly cleaned. All hatches on the containers shall be left open, and all valves or connections shall be severed and left open.

(d) A secondary containment facility is not considered abandoned merely because there have been no discharges into the secondary containment facility. (*State Chemist of the State of Indiana; 355 IAC 2-3-3; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1391, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

### **355 IAC 2-3-4 Prohibited materials**

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-7

Sec. 4. (a) Storage containers and appurtenances may not be constructed of copper, brass, zinc, or copper base alloys.

(b) Storage containers and appurtenances used for the storage of fluid fertilizers containing phosphates or chlorides may not be constructed of aluminum or aluminum alloys.

(c) Storage containers and appurtenances used for the storage of low (less than five (5)) pH fluid fertilizers may not be constructed of ferrous materials other than "316" or "317" stainless steel unless the materials are coated or treated with protective substances which are adequate to inhibit corrosion.

(d) Storage containers and appurtenances used for the storage of low pressure nitrogen solutions may not be constructed of mild steel, fiberglass, polyolefins, or plastic. This prohibition does not extend to nonpressure solutions commonly referred to as twenty-eight percent (28%), thirty percent (30%), or thirty-two percent (32%) nitrogen solutions. This prohibition against the use of mild steel does not extend to aqua ammonia.

(e) Storage containers and appurtenances used for the storage of phosphoric acid may not be constructed of ferrous materials other than "316" or "317" stainless steel unless the container is lined with a suitable substance to prevent corrosion.

(f) Storage containers and appurtenances used for the storage of fluid fertilizers containing potassium chloride (muriate of potash) shall not be constructed of ferrous materials other than stainless steel, unless one (1) of the following shall occur:

(1) The containers and appurtenances are coated or treated with protective substances which are adequate to inhibit corrosion.

(2) The containers and appurtenances are used for storage periods of not more than six (6) months each and are completely emptied between storage periods, cleaned, and inspected for leaks prior to being refilled for any subsequent period.

*(State Chemist of the State of Indiana; 355 IAC 2-3-4; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1392, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822)*

### **355 IAC 2-3-5 Anchoring storage containers**

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-7

Sec. 5. (a) Storage containers shall be anchored, as necessary, to prevent flotation or instability which might occur as a result of liquid accumulations within a secondary containment facility constructed in accordance with this article.

(b) In addition to other approved means, containers shall be assumed to be anchored if product is contained and maintained within the storage containers at least to the height of the secondary containment walls. *(State Chemist of the State of Indiana; 355 IAC 2-3-5; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1392, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822)*

### **355 IAC 2-3-6 Security**

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-7

Sec. 6. (a) Storage containers and appurtenances shall be secured to provide reasonable protection from wildlife, vandalism, and unauthorized access which may result in damage and a subsequent discharge. Such security shall be provided by fencing, lighting, or other approved means.

(b) Valves on storage containers shall be locked or otherwise secured except when persons responsible for facility security are present at the facility.

(c) Valves on mobile fertilizer containers containing fertilizer product and parked overnight at a storage facility shall be locked or secured except when persons responsible for facility security are present at the facility.

(d) Valves on empty containers need not be secured. *(State Chemist of the State of Indiana; 355 IAC 2-3-6; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1392, eff one hundred twenty (120) days after filing with secretary of*

*state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822)*

### **355 IAC 2-3-7 Filling storage containers**

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-7

Sec. 7. Storage containers may not be filled beyond the capacity for which they are designed, taking into account the density of the fluid being stored and thermal expansion during storage. *(State Chemist of the State of Indiana; 355 IAC 2-3-7; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1392, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822)*

### **355 IAC 2-3-8 Pipes and fittings**

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-7

Sec. 8. Pipes and fittings shall be adequately supported to prevent sagging and possible breakage because of gravity and other forces which may be encountered in the ordinary course of operations. *(State Chemist of the State of Indiana; 355 IAC 2-3-8; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1392, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822)*

### **355 IAC 2-3-9 Liquid level gauging device**

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-7

Sec. 9. (a) Every storage container shall be equipped with a liquid level gauging device by which the level of fluid in the storage container can be readily and safely determined.

(b) A liquid level gauging device is not required if the level of fluid in a storage container can be readily and reliably measured by other approved means.

(c) Liquid level gauging devices shall be designed, installed, and secured, in a safe manner, to protect against breakage or vandalism which may result in a discharge or spill.

(d) External sight gauges are prohibited unless securely attached against the container wall and provided with a manually operated shut off valve which is locked in the shut off position at all times the level of fluid is not being determined. *(State Chemist of the State of Indiana; 355 IAC 2-3-9; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1393, eff one hundred twenty (120) days after filing with secretary of state; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3361, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822)*

**355 IAC 2-3-10 Labeling of storage containers****Authority:** IC 15-3-3-12**Affected:** IC 15-3-3-5; IC 15-3-3-7

Sec. 10. Every storage container shall be clearly and prominently labeled to identify its fertilizer contents as provided in IC 15-3-3-5 with the exception that net weight of contents shall not be required. (*State Chemist of the State of Indiana; 355 IAC 2-3-10; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1393, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

**355 IAC 2-3-11 Inspection and maintenance****Authority:** IC 15-3-3-12**Affected:** IC 15-3-3-7

Sec. 11. (a) The operator of a storage facility shall routinely inspect and maintain storage facilities, storage containers, and appurtenances to minimize the risk of a discharge or spill.

(b) The operator shall inspect valves and other appurtenances for leakage at least weekly whenever facilities are in use for storage.

(c) A written record of all inspections and maintenance shall be made on the day of the inspection or maintenance.

(d) Inspection and maintenance records shall be kept at the storage site or at the nearest local office from which the storage site is administered. (*State Chemist of the State of Indiana; 355 IAC 2-3-11; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1393, eff one hundred twenty (120) days after filing with secretary of state; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3361, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

**355 IAC 2-3-12 Compliance with effective date of rule****Authority:** IC 15-3-3-12**Affected:** IC 15-3-3-7

Sec. 12. (a) This rule shall become effective upon the date of adoption.

(b) Full compliance by newly established storage facilities shall be required immediately.

(c) Full compliance by existing storage facilities shall be required no later than twelve (12) months from date of adoption. (*State Chemist of the State of Indiana; 355 IAC 2-3-12; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1393, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

**Rule 4. Operational Area Containment for Fluid Fertilizers**

355 IAC 2-4-1 Loadout and unloading pads

355 IAC 2-4-2 Compliance with effective date of rule

**355 IAC 2-4-1 Loadout and unloading pads****Authority:** IC 15-3-3-12**Affected:** IC 15-3-3-7

Sec. 1. (a) Areas used for the loading of fluid fertilizer into storage containers or for unloading fluid fertilizer from storage containers into mobile containers shall be curbed and paved with reinforced concrete or other suitable material that provides an impervious surface and is approved by the state chemist. Operational area activities at the fluid fertilizer storage facility shall be carried out within this area. Such activities include the loadout and unloading of fluid fertilizer to and from:

- (1) storage containers;
- (2) application equipment;
- (3) mobile containers;
- (4) equipment;
- (5) container washing; and
- (6) other similar activities.

(b) The operational area containment shall be constructed and reinforced to handle at least the foreseeable maximum gross load, including product, equipment that utilize the operational area, mobile container, and motor vehicle. The curbed and paved area shall have a minimum width of ten (10) feet and a minimum length of twenty (20) feet. Any fill or unloading point of the mobile container shall be positioned over the paved area during loading or unloading to assure retention of any discharge.

(c) With the exception of secondary containment areas lined with synthetic or soil liners, and wherever sufficient capacity required in 355 IAC 2-5-1(c) and provisions of this rule are complied with, the diked secondary containment area described in 355 IAC 2-5 may be designed for and jointly used in lieu of a separate operational area containment.

(d) The operational area containment shall form or drain into a liquid-tight catch basin. If operational area containment drains to a sump, the catch basin may include the sump and an aboveground container, provided a pump is installed that automatically transfers the contents of the sump into an aboveground container. Such containers used for the temporary storage of liquids collected from the operational area containment shall be located within secondary containment.

(e) The curbed surface and catch basin shall be of adequate design and size to contain a combined total of at least seven hundred fifty (750) gallons of discharged fluid.

(f) All liquids shall be promptly removed or recovered from the operational area containment such that the capacity required in subsection (e) is available at all times when operations, as referenced in 355 IAC 2-2-10, are taking place.

(g) Storage containers and appurtenances, including pipes, shall be protected against reasonably foreseeable risks of damage by trucks and other moving vehicles engaged in the loading or unloading of fluid bulk fertilizer.

(h) This section does not apply to mobile containers used to nurse field operations when at a field unloading site.

(i) Alternative means, including portable operational area containment systems that meet the capacity requirement of subsection (e) shall be permitted to serve as operational area containment systems if recommended by the manufacturer and approved for this use by the state chemist.

(j) The operator of a storage facility shall routinely inspect and maintain the operational area containment system. Such inspections shall be conducted at least weekly during operational periods.

(k) A written record of all inspections and maintenance shall be made on the day of the inspection or maintenance. Inspection and maintenance records shall be kept at the storage site or at the nearest local office from which the storage site and operational area is administered. (*State Chemist of the State of Indiana; 355 IAC 2-4-1; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1393, eff one hundred twenty (120) days after filing with secretary of state; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3361, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

### 355 IAC 2-4-2 Compliance with effective date of rule

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-7

Sec. 2. (a) This rule shall become effective upon the date of adoption.

(b) Full compliance by newly established storage facilities and operational areas shall be required immediately.

(c) Full compliance by existing storage facilities shall be required no later than two (2) years following adoption. (*State Chemist of the State of Indiana; 355 IAC 2-4-2; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1394, eff one hundred twenty (120) days after filing with secretary of state; filed Jul 23, 1998, 4:38 p.m.: 21 IR 4525; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

### Rule 5. Diked Secondary Containment of Fluid Bulk Fertilizers

355 IAC 2-5-1	General requirements
355 IAC 2-5-2	Walls
355 IAC 2-5-3	Lining; general
355 IAC 2-5-4	Concrete liners
355 IAC 2-5-5	Steel liners
355 IAC 2-5-6	Synthetic liners
355 IAC 2-5-7	Soil liners
355 IAC 2-5-8	Exemptions
355 IAC 2-5-9	Drainage from contained areas within dikes; earthen or prefabricated diked areas ( <i>Repealed</i> )
355 IAC 2-5-10	Drainage from contained areas within dikes; concrete lined areas ( <i>Repealed</i> )
355 IAC 2-5-11	Drainage from contained areas within dikes; recessed catch drain in concrete lined containment area; alternative ( <i>Repealed</i> )
355 IAC 2-5-12	Drainage from contained areas within dikes; elephant rings in lieu of a diked containment area
355 IAC 2-5-12.5	Drainage from contained areas within dikes
355 IAC 2-5-13	Inspection and maintenance
355 IAC 2-5-14	Compliance with effective date of rule

#### 355 IAC 2-5-1 General requirements

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-2; IC 15-3-3-7

Sec. 1. (a) Primary storage of fluid bulk fertilizer shall be located within a diked area constructed with a base, perimeter wall, and sloped floor drain, except as noted in sections 9 through 12 of this rule [355 IAC 2-5-9, 355 IAC 2-5-10, and 355 IAC 2-5-11 were repealed filed Apr 23, 1998, 9:20 a.m.: 21 IR 3365, eff one hundred twenty (120) days after filing with the secretary of state.]. Exception for a sloped floor drain may be granted prior existing diked areas providing other requirements of this rule are met.

(b) The diked area shall be separate from a secondary containment area for other materials and used only for containment of primary storage of fluid bulk fertilizer or other equipment used in the operational area provided the minimum containment requirement noted in subsection (c) is maintained at all times. This subsection shall not prohibit the storage within the diked area of anhydrous ammonia when stored in compliance with rules adopted under IC 15-3-2. Adjoining secondary containment areas may share common walls.

(c) The diked area for containment of storage facilities not protected from rainfall shall contain a minimum of one hundred percent (100%) of the volume of the largest storage container within the diked area plus the volume occupied by all the other tanks, equipment, and appurtenances in the area up to the safe design level of the dike

plus a freeboard of six (6) inches.

(d) Diked secondary containment areas protected from rainfall are not required to provide the freeboard noted in subsection (c) but shall comply with all other requirements therein.

(e) Diked secondary containment areas constructed prior to enactment of this rule and which have a capacity of a minimum of one hundred ten percent (110%) of the volume of the largest storage container within the diked area plus the volume occupied by all the other tanks in the area up to the safe design level of the dike shall be deemed to be in compliance with this rule. Any such storage facility shall, upon alteration of the secondary containment area or increases in storage container volume, be brought into full compliance within ninety (90) days of alteration or increase.

(f) Tile drainage within or underlying the area to be diked shall be eliminated. (*State Chemist of the State of Indiana; 355 IAC 2-5-1; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1394, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

### **355 IAC 2-5-2 Walls**

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-7

Sec. 2. (a) The walls of a secondary containment facility shall be constructed of earth, steel, concrete (precasted modules or poured), or solid masonry and be designed to withstand a full hydrostatic head of any discharged liquid and weight load of material used in construction.

(b) Cracks and seams shall be sealed to prevent leakage.

(c) Walls constructed of earth or other permeable materials shall be lined as provided under sections 3 through 7 of this rule.

(d) Earthen walls shall have a horizontal-to-vertical slope of at least three (3) to one (1), unless a steeper slope is consistent with good engineering practice, and shall be packed and protected from erosion. An exterior slope of thirty (30) degrees and all interior slopes shall be protected with flat road stone or a similar crushed stone material or a minimum of six (6) inches of vegetative soils planted and maintained with shallow rooted grasses.

(e) The top of earthen walls shall be no less than two and one-half (2.5) feet wide.

(f) Walls may not exceed six (6) feet in height above interior grade unless provisions are made for normal access and necessary emergency access to tanks, valves, and other equipment and for safe exit from the secondary containment facility.

(g) Walls constructed of concrete or solid masonry shall rest upon a floating base of concrete prepared as in section 4 of this rule or upon suitable concrete footings which extend below the average frost depth to provide structural integrity. Joints between walls and base must be made watertight. (*State Chemist of the State of Indiana; 355 IAC 2-5-2; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1395, eff one hundred twenty (120) days after filing with secretary of state; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3362, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

### **355 IAC 2-5-3 Lining; general**

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-7

Sec. 3. The base of a secondary containment facility and any earthen walls of the facility shall be lined with concrete, steel, an approved synthetic liner, or a clay soil liner designed to limit permeability of the base and walls. Liners shall meet the requirements of this rule. (*State Chemist of the State of Indiana; 355 IAC 2-5-3; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1395, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

### **355 IAC 2-5-4 Concrete liners**

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-7

Sec. 4. Concrete liners shall be designed according to good engineering practices to withstand any foreseeable loading conditions, including a full hydrostatic head of discharged fluid and static loads of storage containers, including appurtenances, equipment, and contents. Cracks and seams shall be sealed to prevent leakage. (*State Chemist of the State of Indiana; 355 IAC 2-5-4; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1395, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

### **355 IAC 2-5-5 Steel liners**

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-7

Sec. 5. Steel plates may be used for wall and base liners. Installation plans shall be approved by the state chemist who shall require that the plates are protected against corrosion and are joined in a manner as to provide watertight joints. (*State Chemist of the State of Indiana; 355 IAC 2-5-5; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1395, eff one hundred twenty (120) days after filing*

with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822)

### 355 IAC 2-5-6 Synthetic liners

Authority: IC 15-3-3-12

Affected: IC 15-3-3-7

Sec. 6. (a) Synthetic liners and installation plans shall be approved by the state chemist. The installation plan shall address proposed protection of the synthetic liner from mechanical damage and deterioration from exposure to the sun to meet the manufacturer's recommendations. A synthetic liner may not be approved by the state chemist until the manufacturer of the liner provides the state chemist with a written confirmation of compatibility and a written estimate of the life of the liner.

(b) Synthetic liners shall have a minimum thickness of thirty (30) mils (eight-tenths (0.8) millimeters) and be chemically compatible with the materials being stored within the containment and operational areas.

(c) Synthetic liners shall be installed under the supervision of a qualified representative of the manufacturer, and all field constructed seams shall be tested and repaired, if necessary, in accordance with the manufacturer's recommendations. (*State Chemist of the State of Indiana; 355 IAC 2-5-6; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1395, eff one hundred twenty (120) days after filing with secretary of state; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3363, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

### 355 IAC 2-5-7 Soil liners

Authority: IC 15-3-3-12

Affected: IC 15-3-3-7

Sec. 7. The surface soil shall be sealed, including the berm of an earthen dike, with a sealing agent such as sodium bentonite, attapulgite, or a similar cohesive material (clay). The liner shall be constructed in accordance with reliable engineering recommendations to establish a barrier layer that results in a downward water movement of not greater than one-millionth of a centimeter per second ( $1.0 \times 10^{-6}$  cm/sec) at construction and maintained at one hundred thousandth of a centimeter per second ( $1.0 \times 10^{-5}$  cm/sec) with a thickness of not less than six (6) inches. The liner shall be protected based upon reliable engineering practices to maintain its integrity and performance. If heavy mechanized equipment is to be moved over the walls or floor liner, protection to the secondary containment shall be provided. (*State Chemist of the State of Indiana; 355 IAC 2-5-7; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1396, eff one hun-*

*dred twenty (120) days after filing with secretary of state; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3363, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

### 355 IAC 2-5-8 Exemptions

Authority: IC 15-3-3-12

Affected: IC 15-3-3-7

Sec. 8. (a) A liner need not be installed directly under a storage container having a capacity of one hundred thousand (100,000) gallons or more that has been constructed on-site and put into use prior to the effective date of this rule provided that one (1) of the following alternative procedures are complied with, certified to in writing by an official of the company who owns the container, and the certificate is filed with the state chemist:

(1) Alternative 1 shall be as follows:

(A) A second bottom made of steel shall be constructed for the storage container. The second bottom shall be placed over the original bottom and a layer of smooth, fine gravel or coarse sand having a minimum thickness of six (6) inches.

(B) The original bottom of the storage container shall be tested for leaks before the sand layer or second bottom is installed. A record of the test shall be kept on file at the storage facility.

(C) The newly constructed bottom shall be tested for leaks before any fluid fertilizer is stored on the newly constructed bottom. A record of the test shall be kept on file at the storage facility or at the nearest local office from which the storage facility is administered.

(D) There shall be a method by which leaks from the newly constructed bottom into the sand layer may readily be detected.

(E) The newly constructed bottom shall be tested at least once every five (5) years for leaks. A record of the tests shall be kept at the storage facility.

(2) Alternative 2 shall be as follows:

(A) The container shall be emptied, cleaned, and tested for leaks. The walls and floor of the container shall be tested to assure that welds and thickness of steel plates are sound and adequate to contain the fertilizers. A record of the inspection, test results, and of any repairs made shall be submitted to the state chemist and maintained by the owner or operator.

(B) The interior floor and at least twelve (12) inches of the wall areas of the container above the floor shall be coated with an approved liner to inhibit

corrosion. A record of this procedure shall be submitted to the state chemist and maintained by the owner or operator.

(C) An approved test for leaks shall be conducted every five (5) years thereafter. A record of the test findings and of indicated repairs and maintenance shall be maintained by the owner or operator.

(3) Alternative 3 shall be as follows:

(A) Monitoring devices shall be installed in angled borings in the unsaturated earth materials under each tank. These monitoring devices shall constitute a leak detection system for each tank in advance of the point at which any leak would reach ground water.

(B) The number, length, and depth of each boring shall be determined on the basis of site characteristics. The array of monitoring devices under each tank shall constitute the best practical early warning detection system for tank leakage.

(C) Each monitoring plan under this alternative shall be implemented only upon review and approval of the state chemist.

(b) The secondary containment requirements under this rule do not apply to rail cars which are periodically moved to and from the storage facility.

(c) The state chemist may recognize other methods that provide equivalent protection. (*State Chemist of the State of Indiana; 355 IAC 2-5-8; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1396, eff one hundred twenty (120) days after filing with secretary of state; errata filed May 10, 1991, 2:30 p.m.: 14 IR 1730; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3363, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

**355 IAC 2-5-9 Drainage from contained areas within dikes; earthen or prefabricated diked areas (*Repealed*)**

Sec. 9. (*Repealed by State Chemist of the State of Indiana; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3365, eff one hundred twenty (120) days after filing with secretary of state*)

**355 IAC 2-5-10 Drainage from contained areas within dikes; concrete lined areas (*Repealed*)**

Sec. 10. (*Repealed by State Chemist of the State of Indiana; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3365, eff one hundred twenty (120) days after filing with secretary of state*)

**355 IAC 2-5-11 Drainage from contained areas within dikes; recessed catch drain in concrete lined containment area; alternative (*Repealed*)**

Sec. 11. (*Repealed by State Chemist of the State of Indiana; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3365, eff one hundred twenty (120) days after filing with secretary of state*)

**355 IAC 2-5-12 Drainage from contained areas within dikes; elephant rings in lieu of a diked containment area**

Authority: IC 15-3-3-12

Affected: IC 15-3-3-7

Sec. 12. (a) Individual storage containers not exceeding three thousand (3,000) gallons may be contained within a secondary storage container (elephant ring) in lieu of a diked containment area. The elephant ring serves as a second containing wall in the event that the primary storage container develops a leak.

(b) Both the primary storage container and the elephant ring shall be fabricated of material compatible with each other and with the fertilizer being stored. Dissimilar metals between the primary storage container and the elephant ring contribute to electrolytic corrosion and such use is prohibited.

(c) The height of the elephant ring wall shall not exceed four (4) feet. The volume contained within the secondary storage walls up to the working height of the elephant ring shall be sufficient to contain a volume equal to the volume contained in the primary storage container plus the volume displaced by any equipment, that is, pumps or meters, placed within the secondary containment vessel up to the safe storage level of the elephant ring, plus a freeboard of six (6) inches, which freeboard is exempted if the containment system is protected from rainfall.

(d) The elephant ring shall be free of leaks and structural defects. The base shall be protected from corrosion, both from inside and outside, and shall be underlain by a concrete pad or with eight (8) inches of compacted gravel beneath four (4) inches of compacted sand or as recommended by the manufacturer of the elephant ring and approved by the state chemist.

(e) All piping connections to the primary storage container shall be made over the wall of the elephant ring and shall be adequately supported and braced. Pumps and other fixtures, if located within the elephant ring containment structure, shall be placed on an elevated platform.

(f) Accumulations of liquids shall be drained from the elephant ring over the wall of the container by means of

a manually operated pump, and disposed of in accordance with all applicable regulations.

(g) Inspection and maintenance of the primary storage container and of the elephant ring shall be conducted and records of inspections and maintenance maintained as established in section 13 of this rule. (*State Chemist of the State of Indiana; 355 IAC 2-5-12; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1397, eff one hundred twenty (120) days after filing with secretary of state; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3364, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

### **355 IAC 2-5-12.5 Drainage from contained areas within dikes**

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-7

Sec. 12.5. (a) Diked areas shall not have a relief outlet or valve. The base shall slope to a collecting spot where liquid can be discharged, by a manually activated pump, for use in the blending process or for proper disposal in accordance with all applicable regulations.

(b) Any accumulated liquids shall be promptly removed from the diked area. (*State Chemist of the State of Indiana; 355 IAC 2-5-12.5; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3364, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

### **355 IAC 2-5-13 Inspection and maintenance**

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-7

Sec. 13. (a) Every secondary containment shall be inspected by the operator of the storage facility at intervals of not greater than six (6) months and be maintained as necessary to assure compliance with this rule.

(b) A written record of all inspections and maintenance shall be made on the day of the inspection or maintenance and kept at the storage facility or at the nearest local office from which the storage facility is administered.

(c) All secondary containment areas shall be maintained free of debris and foreign matter. (*State Chemist of the State of Indiana; 355 IAC 2-5-13; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1398, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

### **355 IAC 2-5-14 Compliance with effective date of rule**

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-7

Sec. 14. (a) This rule shall become effective upon the date of adoption.

(b) Full compliance by newly established storage facilities shall be required immediately.

(c) Full compliance by existing storage facilities shall be required no later than two (2) years following adoption except full compliance with section 8 of this rule shall not be required until five (5) years from the date of adoption. (*State Chemist of the State of Indiana; 355 IAC 2-5-14; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1398, eff one hundred twenty (120) days after filing with secretary of state; filed Jul 23, 1998, 4:38 p.m.: 21 IR 4525; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

## **Rule 6. Storage and Handling of Dry Bulk Fertilizers**

355 IAC 2-6-1 Outdoor storage (*Repealed*)

355 IAC 2-6-1.5 Storage and handling

355 IAC 2-6-2 Compliance with effective date of rule

### **355 IAC 2-6-1 Outdoor storage (*Repealed*)**

Sec. 1. (*Repealed by State Chemist of the State of Indiana; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3365, eff one hundred twenty (120) days after filing with secretary of state*)

### **355 IAC 2-6-1.5 Storage and handling**

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-7

Sec. 1.5. (a) Dry bulk fertilizer, stored indoors, shall be in a sound structure having a cover or roof top, sidewalls, and a base sufficient to prevent contact with precipitation and surface waters. Temporary outdoor storage shall be allowed for a maximum of thirty (30) days providing material be covered with a tarpaulin, or other suitable covering, to prevent seepage of run-off.

(b) All loading, unloading, mixing, and handling of dry bulk fertilizer shall be performed over an impervious surface that allows for recovery of discharged product unless performed in the field of application. Fertilizer that is discharged shall be promptly recovered. (*State Chemist of the State of Indiana; 355 IAC 2-6-1.5; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3365, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

### **355 IAC 2-6-2 Compliance with effective date of rule**

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-7

Sec. 2. (a) This rule shall become effective upon the

date of adoption.

(b) Full compliance by newly established storage facilities shall be required immediately.

(c) Full compliance by existing storage facilities shall be required no later than three (3) years following adoption. (*State Chemist of the State of Indiana; 355 IAC 2-6-2; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1399, eff one hundred twenty (120) days after filing with secretary of state; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3365, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

### **Rule 7. Control and Recovery of Fertilizer Discharges (Repealed)**

(*Repealed by State Chemist of the State of Indiana; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3365, eff one hundred twenty (120) days after filing with secretary of state*)

### **Rule 8. Record Keeping**

355 IAC 2-8-1 Records required  
355 IAC 2-8-2 Period required for maintenance of records  
355 IAC 2-8-3 Compliance with effective date of rule

### **355 IAC 2-8-1 Records required**

Authority: IC 15-3-3-12  
Affected: IC 15-3-3-7

Sec. 1. The following records shall be prepared and maintained on file at the storage facility or at the nearest local office from which the storage facility is administered:

(1) A semiannual inventory reconciliation, showing the amount of fluid bulk fertilizer and of dry bulk fertilizer from each storage container which is lost or unaccounted for at the end of each semiannual period.

(2) Inspection and maintenance records pertaining to storage containers, appurtenances, operational area containment, and secondary containment facilities, as required by 355 IAC 2-3-11(c), 355 IAC 2-4-1(k), 355 IAC 2-5-8(a), 355 IAC 2-5-13(b).

(3) A record of abandoned underground containers, if any, as required by 355 IAC 2-3-3(b).

(*State Chemist of the State of Indiana; 355 IAC 2-8-1; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1399, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

### **355 IAC 2-8-2 Period required for maintenance of records**

Authority: IC 15-3-3-12  
Affected: IC 15-3-3-7

Sec. 2. (a) Records required under section 1(3) of this

rule shall be maintained as permanent records.

(b) All other required records shall be maintained for at least three (3) years.

(c) Records shall be available for inspection and copying by the state chemist or his agent. (*State Chemist of the State of Indiana; 355 IAC 2-8-2; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1399, eff one hundred twenty (120) days after filing with secretary of state; errata filed May 10, 1991, 2:30 p.m.: 14 IR 1730; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

### **355 IAC 2-8-3 Compliance with effective date of rule**

Authority: IC 15-3-3-12  
Affected: IC 15-3-3-7

Sec. 3. (a) This rule shall become effective upon the date of adoption.

(b) Full compliance by existing and newly established storage facilities shall be required upon the date of adoption. (*State Chemist of the State of Indiana; 355 IAC 2-8-3; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1400, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

### **Rule 9. Storage Facility Location Registry**

355 IAC 2-9-1 Facility registry  
355 IAC 2-9-2 Compliance with effective date of rule

### **355 IAC 2-9-1 Facility registry**

Authority: IC 15-3-3-12  
Affected: IC 15-3-3-7

Sec. 1. The owner, operator, or person in charge of a bulk fertilizer storage facility shall notify the state chemist each year of the facility's location and status. Notice shall include the following:

(1) The facility's mailing address.

(2) The owner or manager.

(3) The type of facility.

(4) The rated or calculated capacity of all bulk tanks and dry storage units and their physical location.

Notice shall be made upon forms furnished by the state chemist's office. (*State Chemist of the State of Indiana; 355 IAC 2-9-1; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1400, eff one hundred twenty (120) days after filing with secretary of state; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3365, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

### **355 IAC 2-9-2 Compliance with effective date of rule**

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-7

Sec. 2. This rule shall become effective upon the date of adoption. (*State Chemist of the State of Indiana; 355 IAC 2-9-2; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1400, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822*)

### ARTICLE 3. AGRICULTURAL AMMONIA

Rule 1. General Provisions

Rule 1.5. Definitions

Rule 2. Basic Rules

Rule 3. Cylinder Systems (*Repealed*)

Rule 4. Stationary, Nonrefrigerated Storage Systems

Rule 5. Systems for Transportation of Ammonia

Rule 6. Systems Mounted on Farm Wagons or Tandem-Axled Trailers and Used for the Transportation and Application of Ammonia

Rule 7. Unitized Systems, Including Applicator Tanks, Mounted on Farm Vehicles for the Transportation and Application of Ammonia

Rule 8. Refrigerated Storage

Rule 9. Minimum Rate of Discharge Permitted for Pressure Relief Valves Used on Containers Not in Accordance with DOT Specifications

Rule 10. Systems Without Containers Mounted on Tool Bars (Implements of Husbandry) for the Application of Ammonia in Conjunction with Nurse Tanks

#### Rule 1. General Provisions

355 IAC 3-1-1 Definitions (*Repealed*)

355 IAC 3-1-2 Applicability of rules (*Repealed*)

#### 355 IAC 3-1-1 Definitions (*Repealed*)

Sec. 1. (*Repealed by State Chemist of the State of Indiana; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1650*)

#### 355 IAC 3-1-2 Applicability of rules (*Repealed*)

Sec. 2. (*Repealed by State Chemist of the State of Indiana; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1650*)

#### Rule 1.5. Definitions

355 IAC 3-1.5-1 Applicability

355 IAC 3-1.5-2 "Applicator tank" defined

355 IAC 3-1.5-3 "Approved" defined

355 IAC 3-1.5-4 "Appurtenance" defined

355 IAC 3-1.5-5 "Authorized inspector" defined

355 IAC 3-1.5-6 "Building of public assembly" defined

355 IAC 3-1.5-7 "Capacity" defined

355 IAC 3-1.5-8 "Chemical splash goggles" or "goggles" defined

355 IAC 3-1.5-9 "Code" defined

355 IAC 3-1.5-10 "Container" defined

355 IAC 3-1.5-11 "Design pressure" defined

355 IAC 3-1.5-12 "DOT" defined

355 IAC 3-1.5-13 "DOT regulations" defined

355 IAC 3-1.5-14 "Emergency shower" defined

355 IAC 3-1.5-15 "Eye wash unit" defined

355 IAC 3-1.5-16 "Farm wagon" defined

355 IAC 3-1.5-17 "Filling density" defined

355 IAC 3-1.5-18 "Full face shield" defined

355 IAC 3-1.5-19 "Gas" defined

355 IAC 3-1.5-20 "Gas mask" defined

355 IAC 3-1.5-21 "Immediately dangerous to life or health" or "IDLH" defined

355 IAC 3-1.5-22 "Implement of husbandry" defined

355 IAC 3-1.5-23 "Local emergency planning committee" or "LEPC" defined

355 IAC 3-1.5-24 "National board" defined

355 IAC 3-1.5-25 "Positive pressure self-contained breathing apparatus" or "SCBA" defined

355 IAC 3-1.5-26 "Pressure relief valve" defined

355 IAC 3-1.5-27 "Protective gloves, boots, and suits" defined

355 IAC 3-1.5-28 "Psia" defined

355 IAC 3-1.5-29 "Psig" defined

355 IAC 3-1.5-30 "Satellite location" defined

355 IAC 3-1.5-31 "Systems" defined

355 IAC 3-1.5-32 "Tank" defined

355 IAC 3-1.5-33 "Tool bar" defined

355 IAC 3-1.5-34 "Tool bar breakaway device" defined

355 IAC 3-1.5-35 "Tool bar refrigeration unit" defined

#### 355 IAC 3-1.5-1 Applicability

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-3

Sec. 1. The definitions in this rule apply throughout this article. (*State Chemist of the State of Indiana; 355 IAC 3-1.5-1; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1623; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

#### 355 IAC 3-1.5-2 "Applicator tank" defined

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-3

Sec. 2. "Applicator tank" means an implement of husbandry, whereupon the tank, carriage, and tool bar form a unitized piece of equipment. (*State Chemist of the State of Indiana; 355 IAC 3-1.5-2; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1623; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

#### 355 IAC 3-1.5-3 "Approved" defined

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-3

Sec. 3. "Approved" means any of the following:

(1) Tested and listed by a recognized testing laboratory as suitable for use with anhydrous ammonia and so

marked or documented by the manufacturer and traceable to the item.

(2) Recommended by manufacturer as suitable for use with anhydrous ammonia and so marked of documented by the manufacturer and traceable to the item.

(3) Inspected and approved by the Indiana state chemist.

(*State Chemist of the State of Indiana; 355 IAC 3-1.5-3; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1623; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

#### **355 IAC 3-1.5-4 “Appurtenance” defined**

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-3

Sec. 4. “Appurtenance” means all devices such as safety devices, liquid level gauging devices, valves, pressure gauges, fittings, metering, or dispensing devices. (*State Chemist of the State of Indiana; 355 IAC 3-1.5-4; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1623; errata filed Apr 24, 2001, 9:06 a.m.: 24 IR 2709; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

#### **355 IAC 3-1.5-5 “Authorized inspector” defined**

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-3

Sec. 5. “Authorized inspector” means an individual who holds a valid and current National Board Commission as an authorized inspector. The term applies only to ASME code pressure vessel alteration and repair. (*State Chemist of the State of Indiana; 355 IAC 3-1.5-5; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1623; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

#### **355 IAC 3-1.5-6 “Building of public assembly” defined**

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-3

Sec. 6. “Building of public assembly” means any building or structure that serves as a place of gathering of persons:

(1) for civic, political, religious, recreational, educational, or travel purposes;

(2) as a place for sheltering persons who receive charitable or other care or aid; or

(3) as a place for involuntary detention of persons under local or state government authority.

(*State Chemist of the State of Indiana; 355 IAC 3-1.5-6; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1624; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

#### **355 IAC 3-1.5-7 “Capacity” defined**

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-3

Sec. 7. “Capacity” means the total volume of the container measured in standard U. S. gallons unless otherwise specified. (*State Chemist of the State of Indiana; 355 IAC 3-1.5-7; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1624; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

#### **355 IAC 3-1.5-8 “Chemical splash goggles” or “goggles” defined**

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-3

Sec. 8. “Chemical splash goggles” or “goggles” means flexible fitting chemical-protective goggles with a hooded indirect ventilation system to provide primary protection of the eyes and eye sockets from the splash of hazardous liquids, which are designed to meet the requirements of ANSI Z87.1, Practice for Occupational and Educational Eye and Face Protection, including current amendments and latest edition of the same. Direct vented goggles do not comply with this definition. (*State Chemist of the State of Indiana; 355 IAC 3-1.5-8; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1624; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

#### **355 IAC 3-1.5-9 “Code” defined**

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-3

Sec. 9. “Code” means the following:

(1) Relative to the construction of pressure vessels:

(A) the Unfired Pressure Vessel Code of the American Society of Mechanical Engineers (Section VIII of the ASME Boiler and Pressure Vessel Code, including the applicable requirements of Sections II, V, and IX), 1965 edition;

(B) the joint code of the American Petroleum Institute and the American Society of Mechanical Engineers (API-ASME Code), 1951 edition; and

(C) subsequent amendments to or later editions of the codes listed in this subdivision.

(2) Relative to the repair or alteration of a pressure vessel, the National Board Inspection Code, the latest edition at the time the pressure vessel is repaired or altered.

(*State Chemist of the State of Indiana; 355 IAC 3-1.5-9; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1624; errata filed Apr 24, 2001, 9:06 a.m.: 24 IR 2709; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

#### **355 IAC 3-1.5-10 “Container” defined**

**Authority:** IC 15-3-2-2; IC 15-3-2-10  
**Affected:** IC 15-3-2-3

Sec. 10. "Container" means all vessels such as tanks or pressure vessels used for the storage, transportation, or application of anhydrous ammonia. (*State Chemist of the State of Indiana*; 355 IAC 3-1.5-10; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1624; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)

### **355 IAC 3-1.5-11 "Design pressure" defined**

**Authority:** IC 15-3-2-2; IC 15-3-2-10  
**Affected:** IC 15-3-2-3

Sec. 11. "Design pressure" has the same meaning as "maximum allowable working pressure" as used in the codes. (*State Chemist of the State of Indiana*; 355 IAC 3-1.5-11; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1624; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)

### **355 IAC 3-1.5-12 "DOT" defined**

**Authority:** IC 15-3-2-2; IC 15-3-2-10  
**Affected:** IC 15-3-2-3

Sec. 12. "DOT" means the United States Department of Transportation. (*State Chemist of the State of Indiana*; 355 IAC 3-1.5-12; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1624; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)

### **355 IAC 3-1.5-13 "DOT regulations" defined**

**Authority:** IC 15-3-2-2; IC 15-3-2-10  
**Affected:** IC 15-3-2-3

Sec. 13. "DOT regulations" refers to the Hazardous Materials Regulations of the United States Department of Transportation. (See 49 CFR, beginning with Part 100 Transportation, including "Specifications for Shipping Containers".) (*State Chemist of the State of Indiana*; 355 IAC 3-1.5-13; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1624; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)

### **355 IAC 3-1.5-14 "Emergency shower" defined**

**Authority:** IC 15-3-2-2; IC 15-3-2-10  
**Affected:** IC 15-3-2-3

Sec. 14. "Emergency shower" means a shower unit permanently connected to a source of clean water that enables the user to have water cascading over the entire body and otherwise meeting the requirements of ANSI Z358.1, Emergency Eyewash and Shower Equipment, including current amendments and latest edition of the same. (*State Chemist of the State of Indiana*; 355 IAC 3-1.5-14; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1624; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)

### **355 IAC 3-1.5-15 "Eye wash unit" defined**

**Authority:** IC 15-3-2-2; IC 15-3-2-10  
**Affected:** IC 15-3-2-3

Sec. 15. "Eye wash unit" means a device used to irrigate and flush the eyes with clean water. The device may be a plumbed unit, permanently connected to a source of clean water, or it may be a self-contained unit, not permanently installed that must be refilled or replaced after use. Any eyewash device must otherwise meet the requirements of ANSI Z358.1. (*State Chemist of the State of Indiana*; 355 IAC 3-1.5-15; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1625; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)

### **355 IAC 3-1.5-16 "Farm wagon" defined**

**Authority:** IC 15-3-2-2; IC 15-3-2-10  
**Affected:** IC 15-3-2-3

Sec. 16. "Farm wagon" means a wagon (running gear) designed for agricultural field use and has a weight bearing capacity and structural strength to safely transport anhydrous ammonia to the field and be pulled through the field during application and allow for flexing of the gear without structurally failing and potentially causing an ammonia release or cause a mechanical hazard to people on public thoroughfares. Wagons (running gears) deemed by the inspector as not meeting the requirements in this section shall be immediately removed from ammonia service. (*State Chemist of the State of Indiana*; 355 IAC 3-1.5-16; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1625; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)

### **355 IAC 3-1.5-17 "Filling density" defined**

**Authority:** IC 15-3-2-2; IC 15-3-2-10  
**Affected:** IC 15-3-2-3

Sec. 17. "Filling density" means the percent ratio of the weight of the gas in a container to the weight of water the container will hold at sixty (60) degrees Fahrenheit. (*State Chemist of the State of Indiana*; 355 IAC 3-1.5-17; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1625; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)

### **355 IAC 3-1.5-18 "Full face shield" defined**

**Authority:** IC 15-3-2-2; IC 15-3-2-10  
**Affected:** IC 15-3-2-3

Sec. 18. "Full face shield" means a device that meets the requirements of ANSI Z87.1, including current amendments and latest edition of the same, designed to provide protection to all of the face from hazards, but which shall only be worn as secondary eye protection,

supplementing the primary eye protection afforded by chemical splash goggles. (*State Chemist of the State of Indiana*; 355 IAC 3-1.5-18; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1625; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)

### 355 IAC 3-1.5-19 “Gas” defined

Authority: IC 15-3-2-2; IC 15-3-2-10  
Affected: IC 15-3-2-3

Sec. 19. “Gas” means anhydrous ammonia in either the gaseous or liquefied state. (*State Chemist of the State of Indiana*; 355 IAC 3-1.5-19; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1625; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)

### 355 IAC 3-1.5-20 “Gas mask” defined

Authority: IC 15-3-2-2; IC 15-3-2-10  
Affected: IC 15-3-2-3

Sec. 20. “Gas mask” means an air purifying device with full facepiece approved by NIOSH/MSHA under the provisions of 30 CFR Part II, Subpart I for use in an ammonia contaminated atmosphere in compliance with 29 CFR 1910.134 and selected in accordance with ANSI Z88.2, Respiratory Protection, including current amendments and latest edition of the same. A gas mask of the air purifying type must be used in an atmosphere containing nineteen and five-tenths percent (19.5%) to twenty-two percent (22.0%) oxygen by volume. (*State Chemist of the State of Indiana*; 355 IAC 3-1.5-20; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1625; errata filed Apr 24, 2001, 9:06 a.m.: 24 IR 2709; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)

### 355 IAC 3-1.5-21 “Immediately dangerous to life or health” or “IDLH” defined

Authority: IC 15-3-2-2; IC 15-3-2-10  
Affected: IC 15-3-2-3

Sec. 21. “Immediately dangerous to life or health” or “IDLH” means the maximum concentration from which unprotected persons are able to escape within thirty (30) minutes without escape-impairing symptoms or irreversible health effects. The IDLH for ammonia is three hundred (300) parts per million by volume in accordance with the NIOSH Pocket Guide to Chemical Hazards, including current amendments and latest edition of the same. (*State Chemist of the State of Indiana*; 355 IAC 3-1.5-21; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1625; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)

### 355 IAC 3-1.5-22 “Implement of husbandry” defined

Authority: IC 15-3-2-2; IC 15-3-2-10  
Affected: IC 15-3-2-3

Sec. 22. “Implement of husbandry” means a farm wagon-type tank trailer used during the liquid fertilizer season as a field storage nurse tank supplying the fertilizer to a field applicator and moved on highways only for bringing the fertilizer from a local source of supply to farms or fields or from one (1) farm or field to another. (*State Chemist of the State of Indiana*; 355 IAC 3-1.5-22; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1625; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)

### 355 IAC 3-1.5-23 “Local emergency planning committee” or “LEPC” defined

Authority: IC 15-3-2-2; IC 15-3-2-10  
Affected: IC 15-3-2-3

Sec. 23. “Local emergency planning committee” or “LEPC” means the designated emergency response planning entity for each Indiana county empowered to coordinate, and responsible for the coordination of, emergency response organizations, personnel, training, equipment, and other resources. (*State Chemist of the State of Indiana*; 355 IAC 3-1.5-23; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1625; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)

### 355 IAC 3-1.5-24 “National board” defined

Authority: IC 15-3-2-2; IC 15-3-2-10  
Affected: IC 15-3-2-3

Sec. 24. “National board” means the National Board of Boiler and Pressure Vessel Inspectors. (*State Chemist of the State of Indiana*; 355 IAC 3-1.5-24; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1626; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)

### 355 IAC 3-1.5-25 “Positive pressure self-contained breathing apparatus” or “SCBA” defined

Authority: IC 15-3-2-2; IC 15-3-2-10  
Affected: IC 15-3-2-3

Sec. 25. “Positive pressure self-contained breathing apparatus” or “SCBA” means a full facepiece respirator approved by NIOSH/MSHA for respiratory protection for both entry into, or escape from, an oxygen-deficient atmosphere or concentration of gases or vapors that are immediately dangerous to life or health where the supply of air is carried by the wearer. The air pressure inside the facepiece is positive in relation to the air pressure of the outside atmosphere during exhalation and inhalation. (*State Chemist of the State of Indiana*; 355 IAC 3-1.5-25;

*filed Jan 19, 2001, 2:04 p.m.: 24 IR 1626; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)*

**355 IAC 3-1.5-26 “Pressure relief valve” defined**

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-3

Sec. 26. “Pressure relief valve” means a device designed to open to prevent an increase in internal fluid pressure in excess of a specified value due to an emergency or abnormal condition and to close and prevent further flow after normal conditions have been restored. (*State Chemist of the State of Indiana; 355 IAC 3-1.5-26; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1626; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)*)

**355 IAC 3-1.5-27 “Protective gloves, boots, and suits” defined**

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-3

Sec. 27. “Protective gloves, boots, and suits” means items made of rubber or other material impervious to ammonia. Gloves refer to gauntlet-style of sufficient length to allow for cuffing. Protective gloves, boots, and suits shall provide thermal protection suitable for ammonia exposure. (*State Chemist of the State of Indiana; 355 IAC 3-1.5-27; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1626; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)*)

**355 IAC 3-1.5-28 “Psia” defined**

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-3

Sec. 28. “Psia” means pounds per square inch absolute. (*State Chemist of the State of Indiana; 355 IAC 3-1.5-28; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1626; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)*)

**355 IAC 3-1.5-29 “Psig” defined**

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-3

Sec. 29. “Psig” means pounds per square inch gauge. (*State Chemist of the State of Indiana; 355 IAC 3-1.5-29; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1626; errata filed Apr 24, 2001, 9:06 a.m.: 24 IR 2709; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)*)

**355 IAC 3-1.5-30 “Satellite location” defined**

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-3

Sec. 30. “Satellite location” means either a storage facility or an area that is used to store nurse tanks on a

routine basis that is seldom occupied by personnel, except during limited instances of actual operation. (*State Chemist of the State of Indiana; 355 IAC 3-1.5-30; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1626; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)*)

**355 IAC 3-1.5-31 “Systems” defined**

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-3

Sec. 31. “Systems” means an assembly of equipment consisting essentially of the container or containers, appurtenances, pumps, compressors, and interconnecting piping used in handling anhydrous ammonia. (*State Chemist of the State of Indiana; 355 IAC 3-1.5-31; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1626; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)*)

**355 IAC 3-1.5-32 “Tank” defined**

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-3

Sec. 32. “Tank” means a vessel designed and constructed for the storage, transportation, or application of anhydrous ammonia. (*State Chemist of the State of Indiana; 355 IAC 3-1.5-32; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1626; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)*)

**355 IAC 3-1.5-33 “Tool bar” defined**

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-3

Sec. 33. “Tool bar” means an implement of husbandry for the field-application of ammonia that is used in conjunction with a nurse tank unit. For purposes of this section, chisel plows, field-cultivators, or other conventional tillage equipment, which has been manufactured or retrofitted with any ammonia valves, gauges, hoses, application knives, metering devices, safety devices, or tool bar refrigeration units for the purpose of ammonia application, is considered to be tool bars. (*State Chemist of the State of Indiana; 355 IAC 3-1.5-33; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1626; errata filed Apr 24, 2001, 9:06 a.m.: 24 IR 2709; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)*)

**355 IAC 3-1.5-34 “Tool bar breakaway device” defined**

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-3

Sec. 34. “Tool bar breakaway device” means a safety disconnect device that is located on the tool bar and is

designed to automatically uncouple and seal the liquid transfer hose from the tool bar in the event of a hitch failure during field-application. (*State Chemist of the State of Indiana; 355 IAC 3-1.5-34; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1626; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### **355 IAC 3-1.5-35 “Tool bar refrigeration unit” defined**

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-3

Sec. 35. “Tool bar refrigeration unit” means a unitized system of ammonia pipe, valves, and gauges, with ammonia monitoring, handling, metering, and manifold-dispensing devices that are used to process pressurized ammonia into refrigerated ammonia for more accurate metering and distribution during field-application. (*State Chemist of the State of Indiana; 355 IAC 3-1.5-35; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1627; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### **Rule 2. Basic Rules**

355 IAC 3-2-1	Approval of equipment
355 IAC 3-2-2	Construction and testing of containers; standards
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355 IAC 3-2-5	Container valves and appurtenances; construction
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### **355 IAC 3-2-1 Approval of equipment**

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-8; IC 15-3-2-11

Sec. 1. (a) Systems utilizing DOT cylinders are not approved for agricultural ammonia use.

(b) In systems utilizing ASME containers, each metering or dispensing device, container valve, excess flow valve, gauging device, pressure relief valve, or other safety device shall be approved as to design, construction, and performance. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec II, Rule 2.1; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p.*

*3; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1627; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### **355 IAC 3-2-2 Construction and testing of containers; standards**

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2

Sec. 2. (a) Containers used with systems covered in 355 IAC 3-4, 355 IAC 3-5, 355 IAC 3-6, and 355 IAC 3-7 shall be constructed and tested in accordance with the 1965 edition (and subsequent amendments thereto) of the Unfired Pressure Vessel Code of the ASME except that construction under Table UW 12 at a basic joint efficiency of under eighty percent (80%) is prohibited and compliance with paragraphs UG 125 through UG 128, UG 132, and UG 133 shall not be required.

(b) All containers, except refrigerated storage tanks with a design pressure of less than fifteen (15) psig, shall be:

(1) inspected by a person having a current certificate of competency from the National Board;

(2) stamped (letter and figure sizes as required by the Code) by a manufacturer, holding a valid certificate of authorization to use the unfired pressure vessel manufacturer’s symbol from the American Society of Mechanical Engineers; and

(3) registered with the National Board.

(c) Containers exceeding thirty-six (36) inches in diameter or two hundred fifty (250) gallons capacity shall be constructed to comply with one (1) or more of the following additional requirements:

(1) Containers shall be stress relieved after fabrication in accordance with the Code.

(2) Cold formed heads, when used shall be stress relieved.

(3) Hot formed heads shall be used.

(d) Noncode welding, where necessary, shall be made only on saddles or brackets originally welded to the containers by the manufacturer. Noncode welding directly to the container or any part subject to pressure is prohibited.

(e) The provisions of subsection (a) shall not be construed as prohibiting the continued use or reinstallation of containers constructed and maintained in accordance with the 1949, 1950, 1952, 1956, 1959, and 1962 editions of the Unfired Pressure Vessel Code of the ASME. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec II, Rule 2.2; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 4; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1627; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### **355 IAC 3-2-3 Markings on containers and systems**

**Authority:** IC 15-3-2-2; IC 15-3-2-10  
**Affected:** IC 15-3-2-8; IC 15-3-2-11

Sec. 3. (a) Each container or system covered in sections 4 through 7 of this rule shall be marked by the manufacturer as follows:

- (1) With a marking identifying compliance with, and other markings required by the rules of the code under which the container is constructed.
- (2) With the name and address of the supplier of the system, or the trade name of the system, together with the year of manufacture.
- (3) With the capacity of the container in pounds or gallons, U.S. Standards.
- (4) With the working pressure in psig for which the container is designed.
- (5) With the wall thickness of the shell and heads.
- (6) With a marking indicating the maximum level to which the container may be filled with liquid at liquid temperatures between twenty (20) degrees Fahrenheit and one hundred (100) degrees Fahrenheit, except on containers:
  - (A) provided with fixed maximum level indicators; or
  - (B) that are filled by weighing.

Markings shall be in increments of not more than twenty (20) degrees Fahrenheit and shall be located on the container dataplate or on a liquid level gauging device. Refrigerated storage tanks shall be exempt from this section but shall be marked to show the maximum permissible liquid level (see section 9(b) of this rule).

(7) With the outside surface area in square feet. Refrigerated storage tanks shall be exempt from this requirement.

(b) Marking specified as on the container shall be on the container itself or on a dataplate permanently affixed thereto. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec II, Rule 2.3; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 4; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1627; errata filed Apr 24, 2001, 9:06 a.m.: 24 IR 2709; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### **355 IAC 3-2-4 Location of containers; display of name and address for emergency contact**

**Authority:** IC 15-3-2-2; IC 15-3-2-10  
**Affected:** IC 15-3-2-5

Sec. 4. (a) Containers shall be located outside of buildings other than those especially constructed for this purpose. Permanent or satellite storage shall be located outside of densely populated areas and subject to the

approval of the state chemist. However, this distance shall not be less than one hundred (100) feet from the line of adjoining property that may be built upon, which line shall run from the far side of a public way or railroad siding where applicable, not less than:

- (1) four hundred (400) feet from any residence;
- (2) one thousand (1,000) feet from any school or other building of public assembly, except hospitals and nursing homes; and
- (3) two thousand (2,000) feet from any hospital or nursing home.

Locations approved by the state chemist prior to changes to this subsection shall remain approved.

(b) At all vehicle entry points to each permanent storage or satellite location, the following emergency response information shall be prominently posted in lettering not less than two (2) inches in height:

- (1) The phrase "EMERGENCY INFORMATION".
- (2) The first and last name of the manager and at least one (1) other responsible person.
- (3) The area code and telephone number of each person listed.
- (4) The phrase on the sign "911 ADDRESS IS:" and the address assigned to the facility location by the Local Emergency Planning Committee.
- (5) For satellite locations, the company name, 911 or in lieu of, physical address area code and telephone number of the company office that operates the satellite location.
- (6) The phrase "Anhydrous Ammonia" and a legend for the color code established in subsection (a).

(*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec II, Rule 2.4; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 5; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1628; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### **355 IAC 3-2-5 Container valves and appurtenances; construction**

**Authority:** IC 15-3-2-2; IC 15-3-2-10  
**Affected:** IC 15-3-2-8; IC 15-3-2-11

Sec. 5. (a) All shutoff valves and appurtenances (liquid or vapor) shall be suitable for use with anhydrous ammonia and designed for not less than the maximum pressure to which they may be subjected. Valves that may be subjected to container pressures shall have a rated working pressure of at least two hundred fifty (250) psig, except valves for refrigerated storage tanks shall have a rated working pressure at least equal to the maximum pressure to which they may be subjected and meet the following requirements:

- (1) At a minimum, all manually operated shutoff

valves, which are either located on tank openings or are the last valves in any ammonia line that are capable of discharge into the open air, shall be color coded to designate the correct product state, either liquid or vapor, that the valves communicate with in the pressure vessel.

(2) Highway orange shall be used to designate that the valve communicates with the liquid space of the tank at maximum permissible filling density.

(3) Highway yellow shall be used to designate that the valve communicates with the vapor space of the tank at maximum permissible filling density.

(4) All piping and all appurtenances, except safety devices, relief valves, gauges, and those shutoff valves that are color coded, shall be painted white.

(5) Only nonfluorescent, fade-resistant colors shall be used.

(6) On systems covered in section 4 of this rule and this section, the manually operated shutoff valves referenced in subdivision (1) shall also be labeled "LIQUID" or "VAPOR" in lettering not less than one (1) inch in height.

(b) All connections to containers, except pressure relief connections and gauging devices, shall have shutoff valves located as close to the container as practicable.

(c) Liquid level gauging devices that are so constructed that outward flow of container contents shall not exceed that passed by a No. 54 drill size opening need not be equipped with excess flow valves.

(d) Openings from containers or through fittings attached directly on a container, to which pressure gauge connection is made, need not be equipped with excess flow valves if such openings are protected by not larger than a No. 54 drill size opening.

(e) All excess flow valves shall be plainly and permanently marked with the following:

- (1) Name or trademark of the manufacturer.
- (2) The catalog number.
- (3) The rated capacity.

(f) Excess flow valves shall be designed to close automatically at the rated flows of vapor or liquid as specified by the manufacturer. The connections and line, including valves or fittings being protected by an excess flow valve, shall have a greater capacity than the rated flow of the excess flow valve so that the valve will likely close in case of failure at any point in the line or fittings.

(g) Excess flow and back pressure check valves shall be located inside of the container or at a point outside where the line enters the container. In the latter case, installation shall be made in such a manner that any undue strain, beyond the excess flow or back pressure check valve, will not cause breakage between the container and the valve.

(h) Excess flow valves shall be designed with a bypass, not to exceed a No. 60 drill size opening, to allow equalization of pressure. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec II, Rule 2.5; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 5; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1628; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### 355 IAC 3-2-6 Piping, tubing, and fittings; construction

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-8; IC 15-3-2-11

Sec. 6. (a) All piping, tubing, and fittings shall be made of steel or other material suitable for anhydrous ammonia service. Brass, copper, or galvanized steel pipe or tubing shall not be used.

(b) Piping used on nonrefrigerated systems shall be at least ASTM A53 Grade B seamless or Electric Resistance Welded Pipe. Pipe joints shall be threaded, welded, or flanged. Pipe shall be at least Schedule 40 when joints are welded or welded and flanged. Pipe shall be at least Schedule 80 when joints are threaded. Threaded nipples shall be seamless. Welding shall be done by a welder certified in accordance with the ASME Code, Section IX, "Welding Qualifications". Tubing joints shall be made up with flared, flareless, or compression type fittings complying with ANSI/ASE J513, ANSI/ASME B31.1, or ANSI/ASME B31.5. Standards refer to current amendments and latest edition of the same.

(c) All pipe lines shall be installed as nearly as possible in a straight line with a minimum amount of pipe and shall not be restricted by an excessive number of tees or elbows.

(d) Rigid connections, or all metal flexible connections with a bursting pressure of one thousand (1,000) psig, shall be used for permanent installation. Flexible connections shall be installed and used in accordance with the manufacturer's recommendations. For temporary installations, hose meeting the requirements of this rule may be used. Piping between the tank discharge nozzle and primary pump suction of refrigerated storage systems is exempt from this subsection.

(e) Adequate provisions shall be made to protect all exposed piping from physical damage that might result from impact by moving machinery, automobiles, or trucks or any other undue strain that may be placed upon the piping.

(f) After assembly, all piping, fittings, and tubing shall be tested and proved to be free from leaks at a pressure not less than the normal operating pressure of the system.

(g) All piping, tubing, and fittings shall be designed for a pressure no less than the maximum pressure to which

they may be subjected in service.

(h) All piping shall be supported in accordance with good piping practices, and provisions shall be made as necessary for expansion, contraction, impact, vibration, and settling. All piping should conform to ANSI/ASME B31.3, Process Piping, except ANSI/ASME B31.5, Refrigeration Piping shall be used for refrigeration piping systems within its scope. Standards refer to current amendments and latest edition of the same.

(i) Cast iron fittings shall not be used. Those parts of valves that are subjected to gas pressure should be made of steel, ductile (nodular) iron, or malleable iron. Valves, in this case, include the following:

- (1) Shutoff valves.
- (2) Excess flow valves.
- (3) Back pressure check valves.
- (4) Emergency shutoff valves.
- (5) Remotely controlled valves.

Ductile iron shall meet the requirements of ANSI/ASTM A395, and malleable iron shall meet the requirements of ANSI/ASTM A47. Standards refer to current amendments and latest edition of the same.

(j) Joint compounds shall be resistant to ammonia and all additives present in the system at the maximum pressure and temperature to which they may be subjected in service.

(k) Underground piping shall be hydrostatically tested at one and one-half (1½) times its working pressure upon installation, repair, modification, or replacement. Newly installed or replacement underground piping other than approved inherently corrosion-resistant materials shall be protected from corrosion or erosion. Some acceptable means for protection are the current amendments and latest edition of the following Standard Recommended Practices established by the National Association of Corrosion Engineers:

- (1) NACE Standard RP0275, Application of Organic Coatings to the External Surface of Steel Pipe for Underground Service.
- (2) NACE Standard RP0276, Extruded Asphalt Mastic Type Protective Coatings for Underground Pipelines.
- (3) NACE Standard RP0375, Application and Handling of Wax-Type Protective Coatings and Wrapper Systems for Underground Pipelines.

(l) When not in use, the acme threads of all acme fittings shall be covered by a weathercap. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec II, Rule 2.6; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 6; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1629; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### 355 IAC 3-2-7 Hose and hose connections; construction

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-8; IC 15-3-2-11

Sec. 7. (a) Hose and hose connectors shall be fabricated of materials that are resistant to the action of anhydrous ammonia and additives.

(b) Hose shall be clearly marked at least once every five (5) feet with the manufacturer's name or trademark, the words Anhydrous Ammonia, the maximum working pressure in psig, and the year of manufacture.

(c) Hose subject to container pressure shall be designed for a minimum working pressure of three hundred fifty (350) psig and a minimum burst pressure of one thousand seven hundred fifty (1,750) psig.

(d) Hose and hose connections located on the low pressure side of flow control or pressure reducing valves or devices discharging to atmospheric pressure shall be designed for a minimum working pressure of sixty (60) psig. All connections shall be designed, constructed, and installed so that there will be no leakage when connected.

(e) Where liquid transfer hose is not drained of liquid upon completion of transfer operations, such hose shall be equipped with an approved shutoff valve at the discharge end. Provision shall be made to prevent excessive hydrostatic pressure in the hose. (See section 8(j) of this rule.)

(f) Hoses shall be permanently removed from service that have been installed and used over a period of time which exceeds the shorter service life of either:

- (1) the service life recommended by the manufacturer of the hose; or
- (2) if used in conjunction with an additive, the service life for the ammonia hose as recommended by the manufacturer of the additive.

(g) Any hose assembly showing any visible deterioration shall be immediately removed from service.

(h) Each hose end valve on each hose in ammonia service shall be equipped with a bleeder valve on the coupling side of the hose end valve.

(i) All liquid transfer hoses that are disconnected from nurse tank and tool bar units shall be drained of all ammonia. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec II, Rule 2.7; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 7; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1630; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### 355 IAC 3-2-8 Pressure relief valves

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-8; IC 15-3-2-11

Sec. 8. (a) Every container used with systems embodied in sections 4 through 7 of this rule shall be provided

with one (1) or more pressure relief valves of spring-loaded or equivalent type. The discharge from pressure relief valves shall be directed away from the container upward and unobstructed to the open air. The rate of discharge, except as provided in 355 IAC 3-8, shall be in accordance with p 355 IAC 3-8-5(a).

(b) Container pressure relief valves shall be set to start-to-discharge as follows, with relation to the design pressure of the container:

<u>Containers</u>	<u>Minimum</u>	<u>Maximum*</u>
ASME Code—1950, 1952, 1956, 1959, and 1962 editions	95%	100%
ASME Code—1946 and 1949 editions, Par. U-200 and U-201	95%	100%
API-ASME Code—all editions	95%	100%
ASME Code—1949 and earlier editions, Par. U-68 and U-69	110%	125%
DOT	As established by DOT regulations	

\*Note: A plus tolerance of 10% is permitted.

(c) Pressure relief valves used on containers or systems described in sections 4 through 7 of this rule shall be constructed to discharge at the rates required in subsection (a). The design of these valves must ensure such discharge before the pressure exceeds one hundred twenty percent (120%) of the maximum (not including the ten percent (10%) referred to in subsection (b) start-to-discharge pressure setting specified in subsection (b).

(d) Pressure relief valves shall be so arranged that the possibility of tampering will be minimized. If the pressure setting adjustment is external, the relief valves shall be provided with approved means for sealing the adjustment.

(e) Shutoff valves shall not be installed between the pressure relief valves and the container, except that a shutoff valve may be used where the arrangement of this valve is such as always to afford full required capacity flow through the relief valves. This exception is made to cover such cases as a three-way valve installed under two (2) pressure relief valves, each of which has the required rate of discharge and is so installed as to allow either of the valves to be closed off at the same time. Another exception to this may be where two (2) separate relief valves are installed with individual shutoff valves. In this case, the two (2) shutoff valve stems shall be mechanically interconnected in a manner that allows full required flow of one (1) relief valve at all times. Still, another exception is a pressure relief valve manifold that allows one (1) valve of two (2), three (3), four (4), or more to be closed off and the remaining valve or valves will provide not less than the rate of discharge shown on the manifold nameplate.

(f) Pressure relief valves shall have direct communication with the vapor space of the container.

(g) Each pressure relief valve used with systems described in sections 4 through 7 of this rule and this section shall be plainly and permanently marked as follows:

(1) With the letters AA or NH<sub>3</sub>. If not so marked, documentation demonstrating suitability for ammonia service, traceable to the manufacturer, is required.

(2) The pressure in psig at which the valve is set to start-to-discharge.

(3) The rate of discharge of the valve at its full open position in cubic feet per minute of air at sixty (60) degrees Fahrenheit and atmospheric pressure (fourteen and seven-tenths (14.7) psia).

(4) The manufacturer's name and catalog number.

(h) Connections, such as couplings, flanges, nozzles, and discharge lines for venting, to which relief valves are attached, shall have internal dimensions of sufficient size to avoid any restriction of flow through the relief valves.

(i) The manufacturer or supplier of a relief valve manifold must publish complete data showing the flow rating through the combined assembly of the manifold with pressure relief valves installed. The manifold flow rating must be determined by testing the manifold with all but one (1) valve discharging. If one (1) or more openings have restrictions not present in the remaining openings, the restricted opening or openings or those having the lowest flow shall be used to establish the flow rate marked on the manifold nameplate. The marking shall be similar to that required in subsection (g) for individual valves.

(j) A hydrostatic relief valve, venting to atmosphere at a safe location, shall be installed between each pair of shutoff valves in an ammonia line where liquid may be trapped. The start-to-discharge pressure of pressure relief valves shall be not less than three hundred fifty (350) psig and not more than four hundred (400) psig for hose assemblies and not more than five hundred (500) psig for piping.

(k) Discharge from pressure relief devices shall not terminate in or beneath any building. (*State Chemist of the State of Indiana; Agricultural Ammonia PTA, Sec II, Rule 2.8; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 7; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1631; errata filed Apr 24, 2001, 9:06 a.m.: 24 IR 2709; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### 355 IAC 3-2-9 Filling densities

Authority: IC 15-3-2-2; IC 15-3-2-10

Affected: IC 15-3-2-8

Sec. 9. (a) The filling densities for nonrefrigerated

containers shall not exceed the following:

	Aboveground
(1) Uninsulated	56%*
(2) Insulated	57%
(3) DOT containers shall be filled in accordance with DOT regulations.	

\*This corresponds to 85% by volume at 5°F and to 90.6% by volume at 60°F.

(b) The filling density for refrigerated storage tanks shall be such that the tanks will not be liquid full at a liquid temperature corresponding to the vapor pressure at the start-to-discharge pressure setting of the pressure relief valve.

(c) If containers are to be filled according to liquid level by any gauging method other than a fixed length dip tube gauge, each container shall have a thermometer well so that the internal liquid temperature can be easily determined and the amount of liquid and vapor in the container corrected to a sixty (60) degrees Fahrenheit basis. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec II, Rule 2.9; filed Dec 30, 1965, 2:15 p.m.; Rules and Regs. 1966, p. 9; filed Jan 19, 2001, 2:04 p.m.; 24 IR 1632; readopted filed Jun 20, 2001, 3:22 p.m.; 24 IR 3822*)

### 355 IAC 3-2-10 Transfer of liquids; pumps; compressors

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-8; IC 15-3-2-11

Sec. 10. (a) At least one (1) qualified operator experienced in the procedures shall monitor the transfer of ammonia from the time the connections are first made until they are finally disconnected. Such monitoring may be performed by a person:

- (1) on site;
- (2) from a remote location; or
- (3) by electronic means.

Capability shall be provided to halt the transfer in the event of an emergency. This subsection does not apply to field application.

(b) Containers shall be filled or used only upon authorization of owner.

(c) Containers shall be gauged and charged only in the open air or in buildings especially provided for that purpose.

(d) Pumps used for transferring ammonia shall be approved for ammonia service and comply with the following:

- (1) Liquid pumps may be of piston, rotary, centrifugal, or regenerative type, designed for a minimum working pressure of three hundred fifty (350) psig.

(2) Positive displacement pumps shall have, installed off the discharge port, a constant differential relief valve discharging through a line of sufficient size to carry the full capacity of the pump at relief valve setting, which setting and installation shall be according to pump manufacturer's recommendation.

(3) On the discharge side of the pump, before the relief valve line, there shall be installed a pressure gauge graduated from zero (0) to four hundred (400) psig or greater if warranted by operating conditions.

(4) Centrifugal or regenerative pumps do not require a bypass relief valve, but the installation shall incorporate a line from the discharge side of the pump to the vapor space of the supplying container and in this line, at accessible level, must be installed a shutoff valve.

(5) Shutoff valves shall be installed within four (4) feet of the inlet and discharge of the pump or within a distance consistent with the manufacturer's recommendation.

(e) Compressors used for transferring or refrigerating ammonia shall be approved for ammonia service and comply with the following:

(1) Compressors, except those used for refrigeration, shall be designed for at least two hundred fifty (250) psig working pressure. Crankcases of compressors not designed to withstand system pressure shall be protected with a suitable pressure relief valve.

(2) Plant piping shall contain shutoff valves located as close as practical to compressor connections.

(3) A pressure relief valve large enough to discharge the full capacity of the compressor shall be connected to the discharge before any shutoff valve. The discharging pressure of this valve shall not exceed three hundred (300) psig.

(4) Compressors, except for refrigeration units or those mounted on nurse tanks and applicators, shall have suction and discharge pressure gauges graduated from zero (0) to four hundred (400) psig or greater if warranted by operating conditions.

(5) Adequate means shall be provided on the compressor suction to minimize the entry of liquid into the compressor. A drainable liquid trap is one (1) means of providing such protection.

(f) In addition to the excess flow valves on the liquid and vapor openings of a container (see section 5(f) of this rule), an excess flow valve or backflow check valve shall be installed in the piping of a system where any hose, covered by section 7 of this rule, either is attached or may be attached. Tool bars are exempt from this requirement. Said excess flow valves or backflow check valves shall be installed as follows:

- (1) Close to the point where the hose and piping are joined.

(2) On the piping side of any manually operated shutoff valve in the proximity of the hose connection, as opposed to the hose side of the shutoff valve.

(3) With a protective weathercap, steel cap, or steel plug (see section 6(i) of this rule) immediately installed at the end of the piping whenever the hose has been removed from the piping.

(g) Ammonia vapors shall not be released to the atmosphere during the transfer of liquid ammonia to containers, including portable containers, at permanent storage locations provided, however, that the venting of ammonia vapors at such locations through container fittings, such as fixed liquid level gauges, rotary tube gauges, and similar gauges during the transfer of liquid ammonia to containers, including portable containers, shall not be prohibited. The following are requirements for capturing ammonia vapors:

(1) Suitable means shall be used to capture any ammonia vapors that might escape the confines of the property boundaries for the facility during:

(A) routine bleeding of connections or lines, depressurizing tanks for maintenance; or

(B) purging tanks subsequent to maintenance and prior to refilling. Regarding required purging of tanks, refer to section 10(i) of this rule.

(2) Release of ammonia vapors may be prevented by burning the vapors, by absorption in water, or through use of minimum bleed type hose end valves. Ammonia solutions shall be disposed in accordance with all applicable regulations.

(3) Water tanks with an open top large enough for human access shall not be used as a means to capture ammonia.

(h) The transfer of anhydrous ammonia from a tank car or transport truck to any other unit for the purpose of converting anhydrous ammonia to aqueous ammonia shall be done only at approved locations (see section 4(a) of this rule) having sufficient permanent storage for the aqueous product to permit continuous and uninterrupted unloading. The converter shall be operated in a manner such that ammonia vapors shall not be released to the atmosphere, consistent with subsection (g)(1).

(i) Containers shall not be unloaded with gas pressure other than from an ammonia source. Upon discovery or subsequent to servicing, air or other system inerts shall be promptly purged from containers using accepted, documented practices. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec II, Rule 2.10; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 9; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1632; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### 355 IAC 3-2-11 Tank car unloading requirements

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-8

Sec. 11. (a) Tank car siding shall be substantially level.

(b) Caution signs shall be so placed on the track or car to give necessary warning to persons approaching the car from the open end or ends of the siding. The signs must be made of metal or other comparable material at least twelve (12) inches high by fifteen (15) inches wide in size, and bear the words, "STOP - TANK CAR CONNECTED", or "STOP - MEN AT WORK", the word "STOP" being in letters at least four (4) inches high. Other words must be in letters at least two (2) inches high. The letters must be white on blue background. A car so protected must not be coupled or moved. The signs must remain in place until the tank car valves have been closed and the transfer lines have been disconnected.

(c) Brakes shall be set and the wheels blocked in both directions on all tank cars being loaded or unloaded.

(d) Tank cars shall be unloaded only through a permanently installed unloading point and into a permanently located bulk storage container. Anhydrous ammonia shall not be unloaded directly from a railroad tank car into a transport truck or other portable container.

(e) A standard derail must be properly set and secured in the derailing position between the car being loaded or unloaded and other cars being moved on the same track.

(f) An ammonia tank car must be consigned for delivery and unloaded on a private track. Local regulations regarding unloading operations shall be observed.

(g) Immediately after loading or unloading a tank car, all valves shall be closed and transfer lines disconnected. Caps or plugs on tank car sample valves, liquid valves, vapor valves, and gauging device valves shall be replaced and made wrench tight. Slip tube gauging devices shall be secured and gauge housings screwed in place. Protective housing covers must be secured, pinned, and proper seals put in place when required. Leaks from any source on a tank car shall be stopped before a car may be released to a carrier. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec II, Rule 2.11; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 10; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1633; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### 355 IAC 3-2-12 Liquid level gauging devices; construction

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-8

Sec. 12. (a) Each container, except containers filled by weight, shall be equipped with a liquid level gauging device of approved design.

(b) All gauging devices shall be arranged so that the maximum liquid level to which the container may be filled is readily determinable (See sections 3(a)(6) and 9(a) of this rule).

(c) Gauging devices that require bleeding of the product to the atmosphere, such as the rotary tube, fixed tube, and slip tube, shall be so designed that the bleed valve maximum opening is not larger than a No. 54 drill size unless provided with an excess flow valve.

(d) Gauging devices shall have a design pressure at least equal to the design pressure of the storage container on which they are used.

(e) Fixed liquid level gauges shall be so designed that the maximum volume of the container filled by liquid shall not exceed eighty-five percent (85%) of its water capacity. The coupling into which the fixed liquid level gauge is threaded must be placed at the eighty-five percent (85%) level of the container. If located elsewhere, the dip tube of this gauge must be installed in such a manner that it cannot be readily removed. (This does not apply to refrigerated storage.)

(f) Gauge glasses of the columnar type shall be restricted to bulk storage installations. They shall be equipped with:

- (1) valves having metallic handwheels;
- (2) excess flow valves; and
- (3) extra heavy glass;

adequately protected with a metal housing applied by the gauge manufacturer. They shall be shielded against the direct rays of the sun. (*State Chemist of the State of Indiana; Agricultural Ammonia PTA, Sec II, Rule 2.12; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 11; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1634; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### **355 IAC 3-2-13 Painting of aboveground containers**

**Authority:** IC 15-3-2-2; IC 15-3-2-10  
**Affected:** IC 15-3-2-8

Sec. 13. All aboveground containers and piping shall be painted white. (*State Chemist of the State of Indiana; Agricultural Ammonia PTA, Sec II, Rule 2.13; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 11; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1634; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### **355 IAC 3-2-14 Training**

**Authority:** IC 15-3-2-2; IC 15-3-2-10  
**Affected:** IC 15-3-2-8

Sec. 14. It is important that personnel understand the properties of ammonia and that they be thoroughly trained in safe practices for its storage and handling. Any

employee, prior to handling, transferring, transporting, or otherwise working with ammonia, shall be trained to understand the properties of ammonia, to become competent in safe operating practices, and to take appropriate actions in the event of a leak or an emergency. Annual refresher training is required. All training shall be documented. (*State Chemist of the State of Indiana; 355 IAC 3-2-14; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1634; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### **355 IAC 3-2-15 Compliance with effective date of rule**

**Authority:** IC 15-3-2-2; IC 15-3-2-10  
**Affected:** IC 15-3-2-8

Sec. 15. Full compliance by existing storage facilities shall be required no later than two (2) years following adoption. (*State Chemist of the State of Indiana; 355 IAC 3-2-15; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1635; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### **Rule 3. Cylinder Systems (Repealed)**

(*Repealed by State Chemist of the State of Indiana; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1650*)

### **Rule 4. Stationary, Nonrefrigerated Storage Systems**

355 IAC 3-4-1	Applicability
355 IAC 3-4-2	Minimum design pressures
355 IAC 3-4-3	Installation of storage containers; above-ground; underground
355 IAC 3-4-4	Container valves and appurtenances; construction
355 IAC 3-4-5	Pressure relief valves; vent pipes
355 IAC 3-4-6	Marking of containers
355 IAC 3-4-7	Capacity
355 IAC 3-4-8	Container valves and appurtenances; protection
355 IAC 3-4-9	Reinstallation of containers; retesting
355 IAC 3-4-10	Safety equipment
355 IAC 3-4-11	Electrical equipment

### **355 IAC 3-4-1 Applicability**

**Authority:** IC 15-3-2-2; IC 15-3-2-10  
**Affected:** IC 15-3-2-8; IC 15-3-2-11

Sec. 1. This rule applies to stationary, nonrefrigerated storage installations. (All basic rules of 355 IAC 3-2 apply to this rule unless otherwise noted.) (*State Chemist of the State of Indiana; Agricultural Ammonia PTA, Sec IV, Rule 4; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 12; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1635; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### **355 IAC 3-4-2 Minimum design pressures**

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-11

Sec. 2. Containers shall be constructed in accordance with 355 IAC 3-2-2 with a minimum design pressure of two hundred fifty (250) psig. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec IV, Rule 4.1; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 12; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1635; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### **355 IAC 3-4-3 Installation of storage containers; aboveground; underground**

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-8; IC 15-3-2-11

Sec. 3. (a) Containers shall be provided with substantial reinforced concrete footings and foundations or structural steel supports mounted on reinforced concrete foundations. In either case, the reinforced concrete foundations or footings must extend below the established frost line and shall be of sufficient width and thickness to support the total weight of the containers and contents adequately. The foundation shall maintain the lowest point of the tank at not less than eighteen (18) inches above the ground. In lieu of footings, unitized, floating type foundations of sufficient size may be used to adequately support the tank, contents, and piping.

(b) Horizontal containers shall be mounted on foundations in such a manner as to permit expansion and contraction. Every container shall be supported so as to prevent the concentration of excessive loads on the supporting portion of the shell. Suitable means of preventing corrosion shall be provided on that portion of the container in contact with the foundations or saddles.

(c) Secure anchorage or adequate pier height shall be provided against container flotation wherever high flood water might occur.

(d) Underground containers are prohibited.

(e) Distance between containers of over one thousand two hundred (1,200) gallons capacity shall be at least five (5) feet. Commonly plumbed containers shall be installed such that the eighty-five percent (85%) liquid fill line of each container is at equal elevation. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec IV, Rule 4.2; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 12; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1635; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### **355 IAC 3-4-4 Container valves and appurtenances; construction**

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-8

Sec. 4. (a) All containers shall be equipped with a fixed liquid level gauge.

(b) All containers shall be equipped with:

(1) a pressure indicating gauge having a dial graduated from zero (0) to four hundred (400) psig; and

(2) an approved shutoff valve located between the gauge and the container.

(c) Each filling connection on storage containers shall have a positive shutoff valve in conjunction with an approved back-pressure check valve. Vapor connections of each filling connection on storage containers shall have a positive shutoff valve together with an approved internal excess flow valve. Use of back-pressure check valves, whose internal safe operating condition is externally verifiable, is encouraged.

(d) All containers shall be equipped with a suitable vapor equalizing connection.

(e) All vapor and liquid connections, except pressure relief valves and those specifically exempt in section 5(c) and 5(d) of this rule, shall be equipped with approved excess flow valves or, in lieu thereof, may be fitted with approved quick-closing internal valves, which, except during operating periods, shall remain closed. For liquid lines at transfer locations used to fill nonstationary containers, use of excess flow valves, whose internal safe operating condition is externally verifiable, is encouraged.

(f) All stationary storage installations shall have approved emergency shutoff valves installed in the liquid discharge piping of the transfer system. This requirement does not apply to fixed piping feeding a process system. The emergency shutoff valves shall be installed in the plant piping so that any break resulting from a pull will occur on the hose or swivel-type piping side of the connection while retaining intact the valves and piping on the plant side of the connection. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec IV, Rule 4.3; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 13; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1635; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### **355 IAC 3-4-5 Pressure relief valves; vent pipes**

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-8

Sec. 5. Every storage container shall be provided with two (2) or more pressure relief valves installed in a manner (see manifold or other arrangement in 355 IAC 3-2-8(e)) which allows one (1) valve of the two (2) or more to be closed while providing the full required capacity flow through the remaining valve or valves. The valves shall be of the spring-loaded or equivalent type and shall comply with the following:

(1) The discharge from pressure relief valves shall be directed away from the container upward and unobstructed to the open air. Vent pipes, if used, shall not be restricted or smaller in size than the relief valve outlet connection. All relief valve discharges shall have suitable rain caps that will allow free discharge of the vapor and prevent the entrance of water. Suitable provision shall be made for draining condensate that may accumulate.

(2) Vent pipes from two (2) or more pressure relief devices located on the same unit, or similar lines from two (2) or more different units, may be run into a common header, provided the cross-sectional area of such header is at least equal to the sum of the cross-sectional area of the individual vent pipes.

*(State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec IV, Rule 4.4; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 13; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1636; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)*

### **355 IAC 3-4-6 Marking of containers**

**Authority:** IC 15-3-2-2; IC 15-3-2-10  
**Affected:** IC 15-3-2-8

Sec. 6. Each container or group of containers shall be marked on at least two (2) sides that are visible with the words "ANHYDROUS AMMONIA" or "CAUTION - AMMONIA" in sharply contrasting colors with letters at least six (6) inches high. One (1) such marking shall be clearly visible from the truck receiving connection, if applicable. *(State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec IV, Rule 4.5; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 14; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1636; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)*

### **355 IAC 3-4-7 Capacity**

**Authority:** IC 15-3-2-2; IC 15-3-2-10  
**Affected:** IC 15-3-2-8

Sec. 7. Individual storage container capacity shall be limited only by good engineering practice. *(State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec IV, Rule 4.6; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 14; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1637; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)*

### **355 IAC 3-4-8 Container valves and appurtenances; protection**

**Authority:** IC 15-3-2-2; IC 15-3-2-10  
**Affected:** IC 15-3-2-8

Sec. 8. (a) Containers and appurtenances shall be located or protected by suitable barriers so as to avoid damage by trucks or other vehicles. Main container shutoff valves shall be kept closed and locked when the installation is unattended.

(b) Storage containers need not be grounded.

(c) Container storage areas shall be accessible to emergency vehicles and personnel. All areas occupied by storage installations shall be kept free of dry grass, weeds, and other combustible materials. Manually controlled valves, which, if open, would allow gas to discharge into the atmosphere, shall be kept locked when the installation is unattended. *(State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec IV, Rule 4.7; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 14; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1637; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)*

### **355 IAC 3-4-9 Reinstallation of containers; retesting**

**Authority:** IC 15-3-2-2; IC 15-3-2-10  
**Affected:** IC 15-3-2-8; IC 15-3-2-12

Sec. 9. Containers, previously installed underground, shall not later be reinstalled aboveground unless, at a minimum, they successfully withstand hydrostatic pressure retests at the pressure specified for the original hydrostatic test as required by the Code under which constructed and show no evidence of serious corrosion. Determination of the extent of any corrosion may require additional nondestructive examination methods, per approved industry standards. Reinstalled containers shall meet the requirements for new installation. *(State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec IV, Rule 4.8; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 15; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1637; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)*

### **355 IAC 3-4-10 Safety equipment**

**Authority:** IC 15-3-2-2; IC 15-3-2-10  
**Affected:** IC 15-3-2-8

Sec. 10. All permanent storage installations shall have on hand, and readily accessible, as a minimum, the following equipment for emergency purposes:

(1) Two (2) full face type gas masks, jointly approved by NIOSH and MSHA, each with one (1) spare ammonia canister in a readily accessible location. A full facepiece ammonia gas mask will provide effective respiratory protection in concentrations of ammonia in air that are not immediately dangerous to life or health for short periods of time. A gas mask is not recommended for respiratory protection in concentrations

exceeding the IDLH, except for escape purposes. In concentrations above the IDLH a positive-pressure, SCBA shall be used in accordance with the provisions of ANSI Z88.2.

(2) Two (2) pairs of protective gloves impervious to ammonia.

(3) Two (2) pairs of protective boots impervious to ammonia.

(4) Protective slickers, or protective pants and jackets, all impervious to ammonia.

(5) A minimum of two (2) accessible:

(A) emergency showers with plumbed eye wash units;

(B) one hundred fifty (150) gallon (minimum) open top containers filled with clean water; or

(C) a combination thereof;

shall be required. It is recommended that the distance from each transfer point to the emergency water supply not exceed ten (10) seconds of travel time or one hundred (100) feet.

(6) Chemical splash goggles or chemical splash goggles with full face shield to be worn over the goggles. A full face shield, if used, shall only be worn as secondary eye protection supplementing the primary eye protection afforded by the chemical splash goggles. A face shield is not to be worn as a substitute for a proper primary eye protection device (goggles).

(7) A reliable emergency communication system in place when personnel are on site.

*(State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec IV, Rule 4.9; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 15; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1637; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)*

### 355 IAC 3-4-11 Electrical equipment

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-8

Sec. 11. (a) The conduit system and electrical equipment for use at ammonia storage installations may be general purpose, dust-tight, or weather-resistant as appropriate.

(b) Electrical systems, such as for lighting or pump motors, shall be installed and grounded in a manner approved by the National Electric Code or local ordinance. *(State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec IV, Rule 4.10; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 15; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1638; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)*

## Rule 5. Systems for Transportation of Ammonia

355 IAC 3-5-1 Applicability

355 IAC 3-5-2 Design pressures; container construction standards

355 IAC 3-5-3 Mounting containers on truck

355 IAC 3-5-4 Container valves and appurtenances; construction

355 IAC 3-5-5 Pressure relief valves

355 IAC 3-5-6 Marking of container

355 IAC 3-5-7 Piping, tubing, and fittings; construction

355 IAC 3-5-8 Safety equipment

355 IAC 3-5-9 Transfer of liquids; pumps or compressors

355 IAC 3-5-10 Protection in case of collision

355 IAC 3-5-11 Chock blocks

355 IAC 3-5-12 Skid tanks

### 355 IAC 3-5-1 Applicability

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-8

Sec. 1. This rule applies specifically to systems mounted on trucks, semitrailers, and trailers (other than those covered under 355 IAC 3-6 and 355 IAC 3-7) used for the transportation of ammonia. All basic rules of 355 IAC 3-2 apply to this rule unless otherwise noted. Systems for tank trucks and trailers for transportation of anhydrous ammonia, in addition to complying with this rule, shall also comply with the requirements of the DOT and those of any other regulatory body that may apply. *(State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec V, Rule 5; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 15; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1638; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)*

### 355 IAC 3-5-2 Design pressures; container construction standards

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-8

Sec. 2. (a) Containers shall be designed and constructed in accordance with the ASME Code, have a minimum design pressure of two hundred sixty-five (265) psig, and meet other applicable requirements of DOT regulations. Containers designed and constructed in accordance with earlier ASME Code editions having a minimum design pressure of two hundred fifty (250) psig and meeting certain limiting conditions prescribed by DOT regulations, are authorized for use.

(b) The shell or head thickness of any container shall not be less than three-sixteenths ( $\frac{3}{16}$ ) of an inch.

(c) Baffles are not required for cargo tanks designed for service in which, under normal conditions, the container is loaded to capacity and discharged at one (1) unloading point. All other containers over five hundred (500) gallons capacity should be equipped with suitable

baffle plates.

(d) All container openings, except pressure relief valves, liquid level gauging devices, and pressure gauges, shall be labeled to designate whether they communicate with liquid or vapor space with the container filled to the maximum permitted filling density. Labels shall be readily visible and may be on or adjacent to the valves closing the openings. Per DOT terminology, the label "SPRAY FILL" may be used in conjunction with "VAPOR". (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec V, Rule 5.1; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 15; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1638; errata filed Apr 24, 2001, 9:06 a.m.: 24 IR 2709; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### 355 IAC 3-5-3 Mounting containers on truck

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-8; IC 15-3-2-11

Sec. 3. (a) The means of attachment of any container to the cradle, frame, or chassis of a vehicle shall be designed to withstand static loading in any direction equal to twice the weight of the container and attachments when filled with lading using a safety factor of not less than 4, based on the ultimate strength of the material to be used.

(b) Hold-down devices, when used, shall anchor the container to the cradle, frame, or chassis in a suitable and safe manner that will not introduce undue concentration of stresses. These devices shall incorporate positive means for drawing the container down tight, and suitable stops or anchors shall be provided to prevent relative movement between container and framing due to stopping, starting, or changes in direction.

(c) Whenever any vehicle is designed and constructed so that cargo tanks constitute in whole or in part the stress member used in lieu of a frame, such cargo tanks shall be designed to withstand the stresses thereby imposed in addition to those covered by the code under which the cargo tank was designed.

(d) If a liquid withdrawal line is installed in the bottom of a container, the connections thereto, including the hose, shall not be lower than the lowest horizontal edge of the trailer axle.

(e) Provisions shall be made to secure both ends of the hose while in transit.

(f) When the cradle and the container are not welded together, suitable material shall be used between them to reduce abrasion. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec V, Rule 5.2; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 16; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1638; readopted filed Jun*

*20, 2001, 3:22 p.m.: 24 IR 3822*)

### 355 IAC 3-5-4 Container valves and appurtenances; construction

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-8

Sec. 4. (a) All containers shall be equipped with a fixed liquid level gauge.

(b) All containers shall be equipped with a pressure-indicating gauge having a dial graduated from zero (0) to four hundred (400) psig.

(c) Nonrecessed container fittings and appurtenances shall be protected against damage by:

- (1) their location;
- (2) the vehicle frame or bumper; or
- (3) protective housing.

The protective housing, if used, shall comply with the requirements under which the containers are fabricated with respect to design and construction and shall be designed to withstand static loadings in any direction equal to twice the weight of the container and attachments when filled with the lading using a safety factor of not less than 4, based on the ultimate strength of the material to be used. The housing shall be protected with a weather cover, if necessary, to ensure proper operation of valves and safety devices.

(d) Filling connections shall be provided with approved automatic valves to prevent backflow in case the filling connection is broken, except that where the filling and discharge connect on a common opening in the container shell and that opening is fitted with a quick-closing internal valve as specified in subsection (e) the automatic valve shall not be required.

(e) All other connections to containers, except pressure relief valves and those specifically exempt in 355 IAC 3-2-5(c) and 355 IAC 3-2-5(d), shall be provided with approved excess flow valves or in lieu thereof may be fitted with approved quick-closing internal valves, which, except during delivery operations, shall remain closed. The control mechanism for such valves may be provided with a secondary control remote from the delivery connections, and such control mechanism shall be provided with a fusible section (melting point two hundred eight (208) degrees Fahrenheit to two hundred twenty (220) degrees Fahrenheit), which will cause the internal valve to close automatically in case of fire.

(f) All containers shall be equipped with an approved vapor return valve of adequate capacity. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec V, Rule 5.3; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 16; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1639; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

**355 IAC 3-5-5 Pressure relief valves****Authority:** IC 15-3-2-2; IC 15-3-2-10**Affected:** IC 15-3-2-8

Sec. 5. The discharge from container relief valves shall be vented away from the container upward and unobstructed to the open air in such a manner as to prevent any impingement of escaping gas upon the container. Loose fitting rain caps shall be used to prevent moisture or foreign material from entering the relief valve outlet. The size of discharge lines from pressure relief valves shall not be smaller than the nominal size of the pressure relief valve outlet connection. Suitable provision shall be made for draining condensate that may accumulate in the discharge pipe. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec V, Rule 5.4; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 17; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1639; errata filed Apr 24, 2001, 9:06 a.m.: 24 IR 2709; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

**355 IAC 3-5-6 Marking of container****Authority:** IC 15-3-2-2; IC 15-3-2-10**Affected:** IC 15-3-2-8

Sec. 6. Every container shall be marked in compliance with DOT regulations. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec V, Rule 5.5; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 17; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1639; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

**355 IAC 3-5-7 Piping, tubing, and fittings; construction****Authority:** IC 15-3-2-2; IC 15-3-2-10**Affected:** IC 15-3-2-8

Sec. 7. (a) All piping, tubing, and metering or dispensing devices shall be securely mounted and protected against damage.

(b) Threaded pipe shall be extra heavy (Schedule 80). Standard weight pipe (Schedule 40) may be used when the joints are welded. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec V, Rule 5.6; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 17; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1640; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

**355 IAC 3-5-8 Safety equipment****Authority:** IC 15-3-2-2; IC 15-3-2-10**Affected:** IC 15-3-2-8

Sec. 8. All tank trucks, trailers, and semitrailers shall be equipped with the following equipment for emergency

purposes:

(1) A full-faced gas mask, jointly approved by NIOSH and MSHA, with one (1) spare ammonia canister in a readily accessible location. A full facepiece ammonia gas mask will provide effective respiratory protection in concentrations of ammonia in air that are not immediately dangerous to life or health for short periods of time. A gas mask is not recommended for respiratory protection in concentrations exceeding the IDLH except for escape purposes. In concentrations above the IDLH, a positive-pressure, SCBA shall be used in accordance with the provision of ANSI Z88.2.

(2) One (1) pair of protective gloves impervious to ammonia.

(3) Chemical splash goggles or chemical splash goggles with full face shield to be worn over goggles. A full face shield, if used, shall only be worn as secondary eye protection supplementing the primary eye protection afforded by the chemical splash goggles. A face shield is not to be worn as a substitute for a proper primary eye protection device (goggles).

(4) A container of not less than five (5) gallons of fresh water.

(*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec V, Rule 5.7; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 17; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1640; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

**355 IAC 3-5-9 Transfer of liquids; pumps or compressors****Authority:** IC 15-3-2-2; IC 15-3-2-10**Affected:** IC 15-3-2-8; IC 15-3-2-11

Sec. 9. (a) Truck and trailer containers shall be loaded by weight or by a suitable liquid level gauging device.

(b) Pumps or compressors when designed and installed in accordance with 355 IAC 3-2-10 and properly protected against physical damage may be mounted upon ammonia tank trucks and trailers.

(c) A cargo tank container of greater than three thousand five hundred (3,500) gallons of water capacity shall be unloaded only at approved locations meeting the requirements of 355 IAC 3-2-4(a). (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec V, Rule 5.8; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 17; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1640; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

**355 IAC 3-5-10 Protection in case of collision****Authority:** IC 15-3-2-2; IC 15-3-2-10**Affected:** IC 15-3-2-8

Sec. 10. Each tank truck and trailer shall be provided with properly attached steel bumpers or a chassis extension so arranged as to protect the container, piping, valves, and fittings in case of collision. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec V, Rule 5.9; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 18; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1640; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### 355 IAC 3-5-11 Chock blocks

Authority: IC 15-3-2-2; IC 15-3-2-10  
Affected: IC 15-3-2-8

Sec. 11. Chock blocks shall be provided. These blocks shall be used to prevent rolling of the vehicle whenever it is parked, including loading and unloading operations. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec V, Rule 5.10; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 18; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1640; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### 355 IAC 3-5-12 Skid tanks

Authority: IC 15-3-2-2; IC 15-3-2-10  
Affected: IC 15-3-2-8

Sec. 12. Skid tanks shall not be used for the transportation of ammonia. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec V, Rule 5.11; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 18; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1641; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

## Rule 6. Systems Mounted on Farm Wagons or Tandem-Axled Trailers and Used for the Transportation and Application of Ammonia

355 IAC 3-6-1	Applicability
355 IAC 3-6-2	Design pressure; container construction standards
355 IAC 3-6-3	Mounting containers on wagons and trailers
355 IAC 3-6-4	Container valves and appurtenances
355 IAC 3-6-5	Marking of container
355 IAC 3-6-6	Safety equipment
355 IAC 3-6-7	Liquid withdrawal and transfer hoses
355 IAC 3-6-8	Hitchpins for transportation and field application

### 355 IAC 3-6-1 Applicability

Authority: IC 15-3-2-2; IC 15-3-2-10  
Affected: IC 15-3-2-8

Sec. 1. This rule applies to containers and pertinent equipment mounted on farm wagons (implements of husbandry) or tandem-axled trailers (implements of husbandry) used for the transportation and application of

ammonia. All basic rules of 355 IAC 3-2 apply to this section unless otherwise noted. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec VI, Rule 6; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 18; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1641; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### 355 IAC 3-6-2 Design pressure; container construction standards

Authority: IC 15-3-2-2; IC 15-3-2-10  
Affected: IC 15-3-2-8

Sec. 2. (a) Containers shall be constructed in accordance with 355 IAC 3-2-2 with a minimum design pressure of two hundred fifty (250) psig.

(b) The shell or head thickness of any container shall not be less than three-sixteenths ( $\frac{3}{16}$ ) of an inch.

(c) All containers over a five hundred (500) gallon capacity shall be equipped with suitable baffle plates. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec VI, Rule 6.1; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 18; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1641; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### 355 IAC 3-6-3 Mounting containers on wagons and trailers

Authority: IC 15-3-2-2; IC 15-3-2-10  
Affected: IC 15-3-2-8; IC 15-3-2-11

Sec. 3. (a) Either four (4) separate container legs or front and rear container saddles shall be welded directly to the pressure vessel by its manufacturer or by a qualified repair organization in accordance with 355 IAC 3-2-2(b). Container legs and saddles shall perform without structural fault or structural failure under conditions of actual use excluding transportation collision.

(b) Suitable hold-down devices shall be provided that will anchor the container at one (1) or more places on each side of the container to the wagon or trailer.

(c) When containers are mounted on four-wheel farm wagons, care shall be taken to ensure that the weight is distributed evenly over both axles.

(d) No container leg, saddle, or any reinforcement to any container leg or saddle shall be welded directly to the wagon (running gear).

(e) A pair of containers mounted on a single running gear and used for the field application of ammonia in conjunction with tool bars shall conform with all requirements of this rule. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec VI, Rule 6.2; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 18; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1641; readopted filed Jun*

20, 2001, 3:22 p.m.: 24 IR 3822)

### 355 IAC 3-6-4 Container valves and appurtenances

Authority: IC 15-3-2-2; IC 15-3-2-10

Affected: IC 15-3-2-8

Sec. 4. (a) All containers shall be equipped with a fixed liquid level gauge.

(b) All containers with a capacity of two hundred fifty (250) gallons or more shall be equipped with a pressure-indicating gauge having a dial graduated from zero (0) to four hundred (400) psig.

(c) The filling connection shall be fitted with an approved positive shutoff valve in conjunction with either an internal back-pressure check valve or an internal excess flow valve.

(d) All containers with a capacity of two hundred fifty (250) gallons or more shall be equipped with an approved shutoff vapor valve.

(e) All vapor and liquid connections, except pressure relief valves and those specifically exempted in 355 IAC 3-2-5(c) and 355 IAC 3-2-5(d), shall be equipped with approved excess flow valves or may be fitted with approved quick-closing internal valves, which, except during operating periods, shall remain closed.

(f) Fittings shall be adequately protected from physical damage by means of a rigid guard designed to withstand static loading in any direction equal to twice the weight of the container and lading using a safety factor of four (4) based upon the ultimate strength of the material used. If the guard encloses the pressure relief valve, the valve shall be properly vented through the guard. The design of the roll cage shall prevent pockets of standing water or ice that might pit or erode any portion of the container, valves, gauges, or appurtenances. The following are requirements for containers:

(1) Containers with head mount roll cages used for the field application of ammonia shall have roll cage protection extending three hundred sixty (360) degrees in the vertical plane transverse to the direction of application such that all valves, gauges, and appurtenances, including any attached hose end valve, nozzle, and hose fitting, are protected from physical impact by the tongue of the wagon (running gear) striking said valves, gauges, and appurtenances, including instances whereupon the tongue may be deformed around the front head of the container.

(2) For nurse tank containers constructed with recessed domes for vapor relief or other valves, the wall thickness of the domes shall be measured every ten (10) years by properly equipped personnel, qualified to perform nondestructive examination, in order to determine if the wall thickness has deteriorated to an

unsafe condition. If testing determines that repair or alteration has become necessary, it shall be done in accordance with the National Board Inspection Code, by a firm holding a valid Certificate of Authorization to use the Repair Symbol from the National Board of Boiler and Pressure Vessel Inspectors. The repair or alteration shall be completed in accordance with 355 IAC 3-2-2(b).

(g) If a liquid withdrawal line is installed in the bottom of a container, the connections thereto, including the hose, shall not be lower than the lowest horizontal edge of the wagon or trailer axle.

(h) Provision shall be made to secure both ends of the hose while in transit. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec VI, Rule 6.3; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 19; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1641; errata filed Apr 24, 2001, 9:06 a.m.: 24 IR 2709; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### 355 IAC 3-6-5 Marking of container

Authority: IC 15-3-2-2; IC 15-3-2-10

Affected: IC 15-3-2-8

Sec. 5. Every container shall be marked in compliance with DOT regulations. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec VI, Rule 6.4; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 19; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1642; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### 355 IAC 3-6-6 Safety equipment

Authority: IC 15-3-2-2; IC 15-3-2-10

Affected: IC 15-3-2-8

Sec. 6. (a) All wagons or trailers shall carry at least five (5) gallons of clean water in a container designed to provide ready access to the water for flushing any area of the body contacted by ammonia.

(b) Protective gloves and chemical splash goggles shall be available during transport and worn while handling ammonia. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec VI, Rule 6.5; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 19; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1642; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### 355 IAC 3-6-7 Liquid withdrawal and transfer hoses

Authority: IC 15-3-2-2; IC 15-3-2-10

Affected: IC 15-3-2-8

Sec. 7. (a) No liquid transfer hose shall be joined between any nurse tank unit and any tool bar during

transport upon a public right-of-way.

(b) During field-application and transportation, no liquid transfer hose of any nurse tank unit, which is mounted upon a single running gear, shall be joined to another nurse tank unit mounted on a separate running gear.

(c) During field-application, any nurse tank unit, pulled in conjunction with another nurse tank unit, shall be equipped with an individual, properly installed break-away device.

(d) A liquid withdrawal line shall not be installed in the bottom of a container on any nurse tank used in conjunction with tool bars for the field-application of ammonia except in conformity with section 4(f) of this rule.

(e) The following requirements apply when liquid transfer hoses are permanently attached to nurse tank units:

(1) Only the end of the liquid transfer hose, which is attached to a male acme-threaded fitting of the tool bar breakaway device, shall be equipped with a straight-type hose end valve with a bleeder valve on its coupling side.

(2) The hose end valve specified in subdivision (1) shall not be attached to a container fill valve of the same nurse tank unit.

(3) A dummy acme adapter or parking plug shall be provided on the roll cage of a single container nurse tank unit or at a safe location on the running gear of a twin container nurse tank unit. The dummy acme adapter or parking plug shall be welded into a position that prevents either end of the hose from being kinked or stowed under undue strain. The hose end valve of the liquid transfer hose shall be connected to said dummy acme adapter or parking plug at all times except when the transfer hose is used for field-application or other active transfer of ammonia through the hose end valve.

(4) On single container nurse tank units, one (1) end of the transfer hose shall be directly attached to the outlet of the liquid withdrawal valve.

(5) On twin container nurse tank units, one (1) end of the transfer hose shall be directly attached to the manifold shutoff valve. A properly sized excess flow valve shall be provided on the tank side of the manifold shutoff valve. The nominal pipe threads of the hose shall pass through the protective bulkhead for the shutoff valve.

(f) The following requirements apply when liquid transfer hoses are not permanently attached to nurse tank units:

(1) On single container nurse tank units, a male acme-threaded fitting shall be provided on the outlet of the

liquid withdrawal valve.

(2) On twin container nurse tank units, a male acme-threaded fitting shall be provided on the outlet of the manifold shutoff valve. A properly sized excess flow valve shall be provided on the tank side of the manifold shutoff valve. The nominal pipe threads of said acme-threaded adapter shall pass through the protective bulkhead for said shutoff valve.

*(State Chemist of the State of Indiana; 355 IAC 3-6-7; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1642; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)*

### **355 IAC 3-6-8 Hitchpins for transportation and field application**

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-8

Sec. 8. Hitchpins used for the transportation and application of ammonia shall be of adequate size and hardness to withstand dynamic stresses of the nurse tank unit and its contents at full capacity. Reliable keepers for the hitchpin shall be used to prevent its loss. *(State Chemist of the State of Indiana; 355 IAC 3-6-8; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1643; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)*

### **Rule 7. Unitized Systems, Including Applicator Tanks, Mounted on Farm Vehicles for the Transportation and Application of Ammonia**

355 IAC 3-7-1	Applicability
355 IAC 3-7-2	Design pressure; container construction standards
355 IAC 3-7-3	Mounting of flow-control devices
355 IAC 3-7-4	Container valves and appurtenances
355 IAC 3-7-5	Location for filling containers
355 IAC 3-7-6	Mounting container to carriage
355 IAC 3-7-7	Marking of container
355 IAC 3-7-8	Safety equipment

#### **355 IAC 3-7-1 Applicability**

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-8

Sec. 1. This rule applies to unitized systems, including applicator tanks (implements of husbandry), mounted on farm vehicles and used for the transportation and application of ammonia. *(State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec VII, Rule 7; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 19; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1643; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)*

#### **355 IAC 3-7-2 Design pressure; container construction standards**

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-8

Sec. 2. (a) Containers shall be constructed in accordance with 355 IAC 3-2-2 with a minimum design pressure of two hundred fifty (250) psig.

(b) The shell or head thickness of any container shall not be less than three-sixteenths ( $\frac{3}{16}$ ) of an inch. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec VII, Rule 7.1; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 19; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1643; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### 355 IAC 3-7-3 Mounting of flow-control devices

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-8; IC 15-3-2-11

Sec. 3. All flow-control devices shall be securely mounted. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec VII, Rule 7.2; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 20; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1644; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### 355 IAC 3-7-4 Container valves and appurtenances

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-8; IC 15-3-2-11

Sec. 4. (a) Each container shall have a fixed liquid level gauge.

(b) The filling connection shall be fitted with an approved positive shutoff valve, in conjunction with either an internal back-pressure check valve or an internal excess flow valve.

(c) An excess flow valve is not required in the vapor connection, provided the controlling orifice is not in excess of seven-sixteenths ( $\frac{7}{16}$ ) of an inch in diameter and the valve is a hand-operated (attached hand wheel or equivalent) shutoff valve. (To assist in filling applicator tanks, it is permissible to bleed vapors to the open air, providing the preceding requirements are met.)

(d) Metering devices may be connected directly to the tank withdrawal valve. A union-type connection is permissible between the tank valve and the metering device. Remote mounting of metering devices is permissible using a hose that meets with the specifications of 355 IAC 3-2-7(b).

(e) No excess flow valve is required in the liquid withdrawal service line provided the controlling orifice between the contents of the container and the outlet of the shutoff valve does not exceed seven-sixteenths ( $\frac{7}{16}$ ) of an inch in diameter. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec VII, Rule 7.3;*

*filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 20; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1644; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### 355 IAC 3-7-5 Location for filling containers

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-5; IC 15-3-2-8

Sec. 5. Containers shall not be filled within two hundred (200) feet of any occupied building on adjoining property. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec VII, Rule 7.4; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 20; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1644; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### 355 IAC 3-7-6 Mounting container to carriage

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-8

Sec. 6. (a) If a container is attached by means of steel bands, suitable material shall be used between the container, its bands, and its cradle to reduce abrasion and minimize corrosion.

(b) Each container shall be securely mounted to its carriage.

(c) No container leg, saddle, or reinforcement to any container leg or saddle shall be welded directly to the carriage. (*State Chemist of the State of Indiana; 355 IAC 3-7-6; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1644; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### 355 IAC 3-7-7 Marking of container

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-8

Sec. 7. (a) Every container shall be marked in compliance with DOT regulations.

(b) Every container shall be marked with a legible decal depicting step-by-step ammonia transfer instructions. (*State Chemist of the State of Indiana; 355 IAC 3-7-7; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1644; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### 355 IAC 3-7-8 Safety equipment

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-8

Sec. 8. (a) All applicator tanks shall carry at least five (5) gallons of clean water in a container designed to provide ready access to the water for flushing any area of the body contacted by ammonia.

(b) Protective gloves and chemical splash goggles shall be available during transport and worn while handling

ammonia. (*State Chemist of the State of Indiana; 355 IAC 3-7-8; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1644; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### Rule 8. Refrigerated Storage

355 IAC 3-8-1	Applicability
355 IAC 3-8-2	Design pressure; tank construction standards
355 IAC 3-8-3	Installation requirements for storage tanks
355 IAC 3-8-4	Shutoff valves; check valves
355 IAC 3-8-5	Pressure relief valves
355 IAC 3-8-6	Tank appurtenances; protection
355 IAC 3-8-7	Reinstallation of tanks; retesting
355 IAC 3-8-8	Prevention of damage from vehicles
355 IAC 3-8-9	Refrigeration load; compressors; system equipment
355 IAC 3-8-10	Safety equipment required

#### 355 IAC 3-8-1 Applicability

**Authority:** IC 15-3-2-2; IC 15-3-2-10  
**Affected:** IC 15-3-2-8; IC 15-3-2-11

Sec. 1. This rule applies specifically to systems utilizing tanks for the storage of anhydrous ammonia under refrigerated conditions. All basic rules of 355 IAC 3-2 apply to this rule unless inconsistent with this section. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec VIII, Rule 8; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 20; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1645; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

#### 355 IAC 3-8-2 Design pressure; tank construction standards

**Authority:** IC 15-3-2-2; IC 15-3-2-10  
**Affected:** IC 15-3-2-8

Sec. 2. (a) Tanks may be designed for any storage pressure desired as determined by economical design of the refrigerated system.

(b) Tanks with a design pressure exceeding fifteen (15) psig shall be constructed in accordance with 355 IAC 3-2-2, and in addition the materials shall be selected from those listed in API Standard 620, Table 2.02, R2.2, R2.2(A), R2.2.1, or R2.3, including current amendments and latest edition of the same.

(c) Tanks with a design pressure of fifteen (15) psig and less shall be constructed in accordance with the general requirements, including current amendments of the latest edition of API Standard 620, including Appendix R.

(d) When austenitic steels or nonferrous materials are used, the ASME Code shall be used as a guide in selection of materials for use at the design temperature. (*State Chemist of the State of Indiana; Agricultural Ammonia*

*PT A, Sec VIII, Rule 8.1; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 20; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1645; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

#### 355 IAC 3-8-3 Installation requirements for storage tanks

**Authority:** IC 15-3-2-2; IC 15-3-2-10  
**Affected:** IC 15-3-2-8; IC 15-3-2-11

Sec. 3. (a) Tanks shall be supported on suitable noncombustible foundations designed to accommodate the type of tank being used.

(b) Adequate protection against flotation or other water damage shall be provided wherever high flood water might occur.

(c) Tanks for product storage at less than thirty-two (32) degrees Fahrenheit shall be supported in such a way, or heat shall be supplied, to prevent the effects of freezing and consequent frost heaving. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec VIII, Rule 8.2; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 21; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1645; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

#### 355 IAC 3-8-4 Shutoff valves; check valves

**Authority:** IC 15-3-2-2; IC 15-3-2-10  
**Affected:** IC 15-3-2-8; IC 15-3-2-11

Sec. 4. (a) Shutoff valves shall be:

(1) provided for all connections, except those with a No. 54 drill size restriction, plugs, safety valves, and thermometer wells; and

(2) located as close to the tank as practicable.

(b) When operating conditions make it advisable, a check valve shall be installed on the fill connection and a remotely operated shutoff valve on other connections located below the maximum liquid level. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec VIII, Rule 8.3; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 21; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1645; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

#### 355 IAC 3-8-5 Pressure relief valves

**Authority:** IC 15-3-2-2; IC 15-3-2-10  
**Affected:** IC 15-3-2-8

Sec. 5. (a) Pressure relief valves shall be set to start-to-discharge at a pressure not in excess of the design pressure of the tank and shall have a total relieving capacity sufficient to prevent a maximum pressure in a tank of more than one hundred twenty percent (120%) of the design pressure.

(b) The total relieving capacity shall be the larger requirement of the following:

(1) Possible refrigeration system upset, such as the following:

- (A) Cooling water failure.
- (B) Power failure.
- (C) Instrument air or instrument failure.
- (D) Mechanical failure of any equipment.
- (E) Excessive pumping rates.

(2) Either of the following formulas for fire exposure:

(A) For valve manufacturers who use weight of vapors to be relieved as a basis for classifying valves:

$$W = \frac{34,500 F A^{0.82}}{L}$$

(B) For valve manufacturers that classify valves on the basis of air flow:

$$Q_a = \frac{633,000 F A^{0.82} \sqrt{ZT}}{LC M}$$

Where: W = Weight of vapors to be relieved in pounds per hour at relieving conditions.

Q<sub>a</sub> = Air flow in cubic feet per minute at standard conditions (sixty (60) degrees Fahrenheit and fourteen and seven-tenths (14.7) psia).

F = Fireproofing credit. Use F = 1.0 except when an approved fireproofing material of recommended thickness is used, then use F = 0.2.

A = Total surface area in square feet up to twenty-five (25) feet above grade or to the equator of a sphere, whichever is greater.

Z = Compressibility factor of ammonia at relieving conditions (if not known, use Z = 1.0).

T = Temperature in degrees R (460 + temperature in degrees F of gas at relieving conditions).

M = Molecular weight = 17 for ammonia.

L = Latent heat of ammonia at relieving conditions.

C = Constant based on relation of specific heats. (C may be obtained from the following table.)

(If K is not known, use C = 315.)

<u>K</u>	<u>C</u>	<u>K</u>	<u>C</u>	<u>K</u>	<u>C</u>
1.00	315	1.26	343	1.52	366
1.02	318	1.28	345	1.54	368
1.04	320	1.30	347	1.56	369
1.06	322	1.32	349	1.58	371
1.08	324	1.34	351	1.60	372
1.10	327	1.36	352	1.62	374
1.12	329	1.38	354	1.64	376
1.14	331	1.40	356	1.66	377
1.16	333	1.42	358	1.68	379
1.18	335	1.44	359	1.70	380
1.20	337	1.46	361	2.00	400
1.22	339	1.48	363	2.20	412
1.24	341	1.50	364		

Where:

$$K = \frac{C_p}{C_v}$$

C<sub>p</sub> = Specific heat of vapor at constant pressure.

C<sub>v</sub> = Specific heat of vapor at constant volume.

If the relieving capacity required for fire exposure is greater than that required by subdivision (1), the additional capacity may be provided by weak roof to shell seams in tanks operating at essentially atmospheric pressure and having an inherently weak roof to shell seam. The weak roof to shell seam is not to be considered as providing any of the capacity required by subdivision (1).

(c) All pressure relief devices shall comply with the following:

(1) The discharge from pressure relief valves shall be vented away from the tank at any desired angle above the horizontal using a vent stack suitably designed for weather protection. The size of discharge lines from pressure relief valves shall not be smaller than the nominal size of relief valve outlet connections. Suitable provisions shall be made for draining condensate that may accumulate.

(2) Discharge lines from two (2) or more pressure relief devices located on the same unit may be run into a common discharge header. Where pressure relief valves from two (2) or more units vent into the same discharge header, the header shall be designed for maximum back pressure of ten percent (10%) of the lowest set pressure for conventional pressure relief valves and fifty percent (50%) of the lowest set pressure for balanced valves when the maximum possible quantity of gas is flowing in the header.

(State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec VIII, Rule 8.4; filed Dec 30, 1965, 2:15 p.m.; Rules and Regs. 1966, p. 21; filed Jan 19,

2001, 2:04 p.m.: 24 IR 1645; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)

### 355 IAC 3-8-6 Tank appurtenances; protection

Authority: IC 15-3-2-2; IC 15-3-2-10

Affected: IC 15-3-2-8

Sec. 6. Refrigerated storage tanks shall comply with 355 IAC 3-4-8. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec VIII, Rule 8.5; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 23; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1646; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### 355 IAC 3-8-7 Reinstallation of tanks; retesting

Authority: IC 15-3-2-2; IC 15-3-2-10

Affected: IC 15-3-2-8; IC 15-3-2-12

Sec. 7. Tanks of such size as to require field fabrication shall be, when moved and reinstalled, reconstructed and reinspected in complete accordance with the code under which they were constructed. The tanks shall be subjected to a pressure retest, and, if rerating is necessary, the test shall be done in accordance with the applicable code procedures. (*State Chemist of the State of Indiana; Agricultural Ammonia PTA, Sec VIII, Rule 8.6; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 23; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1646; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### 355 IAC 3-8-8 Prevention of damage from vehicles

Authority: IC 15-3-2-2; IC 15-3-2-10

Affected: IC 15-3-2-8

Sec. 8. Precaution shall be taken to avoid any damage by trucks, tractors, or other vehicles. (*State Chemist of the State of Indiana; Agricultural Ammonia PT A, Sec VIII, Rule 8.7; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 23; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1647; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### 355 IAC 3-8-9 Refrigeration load; compressors; system equipment

Authority: IC 15-3-2-2; IC 15-3-2-10

Affected: IC 15-3-2-8; IC 15-3-2-11

Sec. 9. (a) The total refrigeration load shall be computed as the sum of the following:

- (1) Load imposed by heat flow into the tank caused by the temperature differential between design ambient temperature and storage temperature.
- (2) Load imposed by heat flow into the tank caused by maximum sun radiation.

(3) Maximum load imposed by filling the tank with ammonia warmer than the design storage temperature unless facilities are provided to safely dispose of vented vapors.

(b) More than one (1) storage tank may be handled by the same refrigeration system.

(c) Requirements for compressors shall be as follows:

(1) A minimum of two (2) compressors shall be provided, either of which is of sufficient size to handle the loads listed in subsection (a)(1) and (a)(2). Where more than two (2) compressors are provided, minimum standby equipment equal to the largest normally operating equipment shall be installed. Filling compressors may be used as standby equipment for holding compressors.

(2) Compressors shall be sized to operate with a suction pressure at least ten percent (10%) below the minimum setting of the safety valve on the storage tank and shall withstand a suction pressure at least equal to one hundred twenty percent (120%) of the design pressure of the tank. Discharge pressure is governed by condensing conditions.

(d) Requirements for compressor drives shall be as follows:

(1) Each compressor shall have its individual driving unit.

(2) Any standard drive consistent with good design may be used.

(3) An emergency source of power of sufficient capacity to handle the loads listed in subsection (a)(1) and (a)(2) shall be provided unless facilities are provided to safely dispose of vented vapors while the refrigeration system is not operating.

(e) Requirements for automatic control equipment shall be as follows:

(1) The refrigeration system shall be arranged with suitable controls to govern the compressor operation in accordance with the load as evidenced by the pressure in the tank or tanks.

(2) An emergency alarm system shall be installed to function in the event the pressure in the tank or tanks rises to the maximum allowable operating pressure.

(3) An emergency alarm and shutoff shall be located in the condenser system to respond to excess discharge pressure caused by failure of the cooling medium.

(4) All automatic controls shall be installed in a manner to preclude operation of alternate compressors unless the controls will function with the alternate compressors.

(f) Requirements for separators shall be as follows:

(1) An entrainment separator of suitable size and design pressure shall be installed in the compressor suction line. The separator shall be equipped with a drain and gauging device.

(2) An oil separator of suitable size shall be installed in the compressor discharge line. The oil separator shall be designed for at least two hundred fifty (250) psig and shall be equipped with a gauging device and drain valve.

(g) The condenser system may be cooled by air or water, or both. The condenser shall be designed for at least two hundred fifty (250) psig. Provision shall be made for purging noncondensibles either manually or automatically.

(h) A receiver shall be provided that is equipped with an automatic float valve to discharge the liquid ammonia to storage or with a high pressure liquid drain trap of suitable capacity. The receiver shall be designed for at least two hundred fifty (250) psig operating pressure and be equipped with the necessary connections, safety valves, and gauging device.

(i) Requirements for insulation shall be as follows:

(1) Where insulation is required, the insulation thickness shall be determined by good economical design.

(2) Insulation on refrigerated tanks and pipe lines shall be suitably waterproofed. The insulating material shall be fire retardant; the weatherproofing shall be fire resistant.

(j) All piping shall be well supported and provision shall be made for expansion and contraction. All refrigeration system piping shall conform to the Refrigeration Piping Code, including current amendments and latest edition of the same (ANSI/ASME B31.5), a section of the American Standard Code for Pressure Piping, as it applies to ammonia. (*State Chemist of the State of Indiana; Agricultural Ammonia PTA, Sec VIII, Rule 8.8; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 23; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1647; errata filed Apr 24, 2001, 9:06 a.m.: 24 IR 2709; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### 355 IAC 3-8-10 Safety equipment required

Authority: IC 15-3-2-2; IC 15-3-2-10

Affected: IC 15-3-2-8

Sec. 10. All refrigerated storage plants shall have on hand the minimum safety equipment required under 355 IAC 3-4-10. (*State Chemist of the State of Indiana; Agricultural Ammonia PTA, Sec VIII, Rule 8.9; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 25; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1648; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### Rule 9. Minimum Rate of Discharge Permitted for Pressure Relief Valves Used on Containers Not in Accordance with DOT Specifications

355 IAC 3-9-1 Minimum rate of discharge for pressure relief valves

### 355 IAC 3-9-1 Minimum rate of discharge for pressure relief valves

Authority: IC 15-3-2-2; IC 15-3-2-10

Affected: IC 15-3-2-8

Sec. 1. The minimum required rate of discharge in cubic feet per minute of air at one hundred twenty percent (120%) of the maximum permitted start-to-discharge pressure for pressure relief valves to be used on containers other than those constructed in accordance with DOT specifications shall be as follows:

Surface Area Square Feet	Flow Rate CFM Air
20	258
25	310
30	360
35	408
40	455
45	501
50	547
55	591
60	635
65	678
70	720
75	762
80	804
85	845
90	885
95	925
100	965
105	1,010
110	1,050
115	1,090
120	1,120
125	1,160
130	1,200
135	1,240
140	1,280
145	1,310
150	1,350
155	1,390
160	1,420
165	1,460
170	1,500
175	1,530
180	1,570
185	1,600
190	1,640
195	1,670

200	1,710
210	1,780
220	1,850
230	1,920
240	1,980
250	2,050
260	2,120
270	2,180
280	2,250
290	2,320
300	2,380
310	2,450
320	2,510
330	2,570
340	2,640
350	2,700
360	2,760
370	2,830
380	2,890
390	2,950
400	3,010
450	3,320
500	3,620
550	3,910
600	4,200
650	4,480
700	4,760
750	5,040
800	5,300
850	5,590
900	5,850
950	6,120
1,000	6,380
1,050	6,640
1,100	6,900
1,150	7,160
1,200	7,400
1,250	7,660
1,300	7,910
1,350	8,160
1,400	8,410
1,450	8,650
1,500	8,900
1,550	9,140
1,600	9,380
1,650	9,620
1,700	9,860
1,750	10,090

1,800	10,330
1,850	10,560
1,900	10,800
1,950	11,030
2,000	11,260
2,050	11,490
2,100	11,720
2,150	11,950
2,200	12,180
2,250	12,400
2,300	12,630
2,350	12,850
2,400	13,080
2,450	13,300
2,500	13,520

(1) Surface Area = Total outside surface area of a container in square feet. When the surface area is not stamped on the name plate or when the marking is not legible, the area can be calculated by using one (1) of the following formulas:

(A) Cylindrical container with hemispherical heads:  
 Area = overall length in feet times outside diameter in feet times 3.1416

(B) Cylindrical container with other than hemispherical heads:  
 Area = (overall length in feet plus 0.3 outside diameter in feet) times outside diameter in feet times 3.1416

(C) Spherical container:  
 Area = outside diameter in feet squared times 3.1416

(2) Flow Rate CFM Air = Cubic feet per minute of air required at standard conditions, sixty (60) degrees Fahrenheit and atmospheric pressure (14.7 psia).

The rate of discharge may be interpolated for intermediate values of surface area. For containers with a total outside surface area greater than two thousand five hundred (2,500) square feet, the required flow rate can be calculated using the formula, Flow Rate CFM Air = 22.11 A<sup>0.82</sup>, where A = outside surface area of the container in square feet. (*State Chemist of the State of Indiana; Agricultural Ammonia App A; filed Dec 30, 1965, 2:15 p.m.: Rules and Regs. 1966, p. 26; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1648; errata filed Apr 24, 2001, 9:06 a.m.: 24 IR 2709; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

**Rule 10. Systems Without Containers Mounted on Tool Bars (Implements of Husbandry) for the Application of Ammonia in Conjunction with Nurse Tanks**

355 IAC 3-10-1	Applicability
355 IAC 3-10-2	Tool bar breakaway devices
355 IAC 3-10-3	Liquid transfer hoses
355 IAC 3-10-4	Tool bar refrigeration units
355 IAC 3-10-5	Pressure gauges
355 IAC 3-10-6	Retrofit kits for field tillage equipment

### 355 IAC 3-10-1 Applicability

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-8

Sec. 1. This rule applies to separate tool bar systems (implements of husbandry) for the application of ammonia, in conjunction with the nurse tank systems mounted on wagons (running gears). All basic rules of 355 IAC 3-2 apply to this rule unless otherwise noted. (*State Chemist of the State of Indiana; 355 IAC 3-10-1; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1649; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### 355 IAC 3-10-2 Tool bar breakaway devices

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-8

Sec. 2. (a) All tool bars approved for the application of anhydrous ammonia shall be provided with an approved automatic breakaway self-closing coupling device.

(b) Subsequent to discovery, broken, defective, or corroded breakaway devices shall be replaced prior to any continued use.

(c) The location for the point of separation of all tool bar breakaway devices and the structural specifications for the riser stand assembly used to properly attach and position the breakaway device on the tool bar shall conform with good engineering practices.

(d) A bleeder valve shall be provided on the portion of the breakaway device connected directly or indirectly to the metering device of the tool bar.

(e) Breakaway devices shall be installed by means of a double swivel mounting mechanism that will enable the breakaway device to swivel both horizontally and vertically such that the breakaway shall be able to function properly. (*State Chemist of the State of Indiana; 355 IAC 3-10-2; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1649; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### 355 IAC 3-10-3 Liquid transfer hoses

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-8

Sec. 3. (a) The following apply when liquid transfer hoses are permanently attached to tool bar units:

(1) Only the end of the liquid transfer hose, which is attached to a male acme-threaded fitting of the nurse

tank withdrawal valve, on single container nurse tank units, or on the manifolded withdrawal valve on twin container nurse tanks, shall be equipped with a straight-type hose end valve with a bleeder valve on its coupling side.

(2) A dummy acme adapter or parking plug shall be provided on the tool bar. The dummy acme adapter or parking plug shall be welded into a position that prevents either end of the hose from being kinked or stowed under undue strain. The hose end valve of the liquid transfer hose shall be connected to the dummy acme adapter or parking plug at all times, except when the transfer hose is used for field-application or other active transfer of ammonia through the hose end valve.

(b) The follow apply when liquid transfer hoses are not permanently attached to tool bars:

(1) Hoses for the transfer of ammonia from the nurse tank to the tool bar shall be equipped with straight-type hose end valves with a bleeder valve on the coupling side. This subdivision does not apply to nurse tanks with head mount roll cages.

(2) On tool bars, a male acme-threaded fitting shall be provided on the inlet to the tool bar breakaway device.

(3) The acme threads of the acme fitting specified in subdivision (1) shall be covered by a weathercap.

(*State Chemist of the State of Indiana; 355 IAC 3-10-3; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1650; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### 355 IAC 3-10-4 Tool bar refrigeration units

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-8

Sec. 4. (a) The manufacturer of a tool bar refrigeration unit shall provide traceable documentation of recommended operation and maintenance procedures for any refrigeration unit manufactured after the effective date of this rule.

(b) Tool bar refrigeration units shall be:

(1) constructed of corrosion resistant materials; and  
(2) installed, maintained, and operated in accordance with the manufacturer's specifications and limitations for use.

(c) A manual shutoff valve, meeting the requirements of 355 IAC 3-2-5(a), shall be installed directly upon the inlet of the heat exchanger so that the operator may close the shutoff valve to prevent any backflow of refrigerated ammonia through the delivery line from the heat exchanger unit while connecting, disconnecting, or otherwise servicing the tool bar breakaway device. The manual shutoff valve may be a quick-acting shutoff valve. (*State Chemist of the State of Indiana; 355 IAC 3-10-4; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1650; errata*)

*filed Apr 24, 2001, 9:06 a.m.: 24 IR 2709; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822)*

### **355 IAC 3-10-5 Pressure gauges**

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-8

Sec. 5. (a) A pressure gauge, graduated from zero (0) to sixty (60) psig, shall be installed in communication with any manifold for application knives that receive nonrefrigerated ammonia. The pressure gauge may be remotely located from the manifold for the convenience of the applicator.

(b) A pressure gauge, graduated from zero (0) to four hundred (400) psig, shall be installed at a conspicuous location near the breakaway device between the tool bar breakaway device and the next shutoff device on the meter side of the breakaway. (*State Chemist of the State of Indiana; 355 IAC 3-10-5; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1650; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

### **355 IAC 3-10-6 Retrofit kits for field tillage equipment**

**Authority:** IC 15-3-2-2; IC 15-3-2-10

**Affected:** IC 15-3-2-8

Sec. 6. Retrofit kits for the conversion of conventional tillage equipment into ammonia application equipment shall be installed, maintained, and operated in accordance with the manufacturer's specifications and limitations for use. (*State Chemist of the State of Indiana; 355 IAC 3-10-6; filed Jan 19, 2001, 2:04 p.m.: 24 IR 1650; readopted filed Jun 20, 2001, 3:22 p.m.: 24 IR 3822*)

## **ARTICLE 4. PESTICIDE USE AND APPLICATION**

Rule 0.5. Definitions

Rule 1. Categorization of Licenses and Certificates

Rule 2. Site Awareness and Direct Supervision of Non-Certified Applicators

Rule 3. Financial Responsibility of Commercial Applicators

Rule 4. Records

Rule 5. Licensed Applicators (for Hire) and Registered Technicians; Qualifications, Training, and Supervision

Rule 6. Training Requirements for Licensed Applicators and Registered Technicians; Category 3b

### **Rule 0.5. Definitions**

355 IAC 4-0.5-1 Applicability

355 IAC 4-0.5-2 "Licensed applicator for hire" defined

355 IAC 4-0.5-3 "Licensed applicator not for hire" defined

355 IAC 4-0.5-4 "Licensed public applicator" defined

### **355 IAC 4-0.5-1 Applicability**

**Authority:** IC 15-3-3.6-4; IC 15-3-3.6-5

**Affected:** IC 15-3-3.6

Sec. 1. The definitions in this rule apply throughout this article. (*State Chemist of the State of Indiana; 355 IAC 4-0.5-1; filed Nov 22, 1999, 3:39 p.m.: 23 IR 776; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269*)

### **355 IAC 4-0.5-2 "Licensed applicator for hire" defined**

**Authority:** IC 15-3-3.6-4; IC 15-3-3.6-5

**Affected:** IC 15-3-3.6

Sec. 2. "Licensed applicator for hire" means any licensed certified commercial applicator who is employed by a licensed pesticide business and is directly responsible for the use or supervision of the use of any pesticide on the property of another. (*State Chemist of the State of Indiana; 355 IAC 4-0.5-2; filed Nov 22, 1999, 3:39 p.m.: 23 IR 776; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269*)

### **355 IAC 4-0.5-3 "Licensed applicator not for hire" defined**

**Authority:** IC 15-3-3.6-4; IC 15-3-3.6-5

**Affected:** IC 15-3-3.6

Sec. 3. (a) "Licensed applicator not for hire" means a licensed certified commercial applicator who is employed by a private employer to use or supervise the use of:

(1) a restricted use pesticide on the property of the employer; or

(2) any pesticide on the property of the employer in a potentially hazardous situation or site as determined by the Indiana pesticide review board by rule.

(b) The term does not include the following:

(1) A doctor of veterinary medicine.

(2) A medical doctor.

(3) An applicator who uses only the following nonrestricted use pesticides:

(A) Germicides.

(B) Disinfectants.

(C) Bactericides.

(D) Sanitizers.

(E) Water purifiers.

(F) Swimming pool chemicals.

(*State Chemist of the State of Indiana; 355 IAC 4-0.5-3; filed Nov 22, 1999, 3:39 p.m.: 23 IR 776; errata filed Dec 9, 1999, 12:31 p.m.: 23 IR 813; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269*)

### **355 IAC 4-0.5-4 "Licensed public applicator" defined**

**Authority:** IC 15-3-3.6-4; IC 15-3-3.6-5

**Affected:** IC 15-3-3.6

Sec. 4. (a) "Licensed public applicator" means a licensed certified commercial applicator who, as an employee of a state agency, municipal corporation, or other governmental agency, uses or supervises the use of:

- (1) a restricted use pesticide; or
- (2) any pesticide in a potentially hazardous situation or site as determined by the Indiana pesticide review board by rule.
- (b) The term does not include the following:
  - (1) A doctor of veterinary medicine.
  - (2) A medical doctor.
  - (3) An applicator who uses only the following nonrestricted use pesticides:
    - (A) Germicides.
    - (B) Disinfectants.
    - (C) Bactericides.
    - (D) Sanitizers.
    - (E) Water purifiers.
    - (F) Swimming pool chemicals.

*(State Chemist of the State of Indiana; 355 IAC 4-0.5-4; filed Nov 22, 1999, 3:39 p.m.: 23 IR 777; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269)*

#### **Rule 1. Categorization of Licenses and Certificates**

355 IAC 4-1-1	Definitions <i>(Repealed)</i>
355 IAC 4-1-1.1	Commercial applicators; licensing
355 IAC 4-1-2	Licensed applicator not for hire; certification <i>(Repealed)</i>
355 IAC 4-1-2.1	Commercial applicators; certification standards and procedures
355 IAC 4-1-3	Commercial applicators; categories of certification and licenses
355 IAC 4-1-4	Private applicators; certification standards and procedures

#### **355 IAC 4-1-1 Definitions *(Repealed)***

Sec. 1. *(Repealed by State Chemist of the State of Indiana; filed Nov 21, 1984, 3:33 pm: 8 IR 334)*

#### **355 IAC 4-1-1.1 Commercial applicators; licensing**

**Authority:** IC 15-3-3.6-4; IC 15-3-3.6-5  
**Affected:** IC 15-3-3.6-2

Sec. 1.1. (a) An individual who is employed as a licensed applicator by more than one (1) business or agency at the same time shall hold separate and distinct licenses for each employer and shall pay all applicable license fees.

(b) Completing the certification requirements as a commercial applicator (IC 15-3-3.6-2(7)) shall be a qualifying requirement for each of the licenses defined in 355 IAC 4-0.5. *(State Chemist of the State of Indiana;*

*355 IAC 4-1-1.1; filed Nov 21, 1984, 3:33 p.m.: 8 IR 331; filed Nov 22, 1999, 3:39 p.m.: 23 IR 777; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269)*

#### **355 IAC 4-1-2 Licensed applicator not for hire; certification *(Repealed)***

Sec. 2. *(Repealed by State Chemist of the State of Indiana; filed Nov 21, 1984, 3:33 pm: 8 IR 334)*

#### **355 IAC 4-1-2.1 Commercial applicators; certification standards and procedures**

**Authority:** IC 15-3-3.6-3; IC 15-3-3.6-4; IC 15-3-3.6-5  
**Affected:** IC 15-3-3.6-8.1

Sec. 2.1. (a) Initial certification of commercial applicators shall be by written examinations as set forth in subsections (b) and (c). The minimum passing score on all examinations administered by the state chemist shall be seventy-five percent (75%) unless another minimum passing score has been established by the state chemist after consideration of the recommendations of the standards committee described in subsection (d).

(b) Each certified commercial applicator shall have passed a core and category or combined core and category examination covering, at a minimum, subject matter and standards that have been identified to the state chemist by the standards committee described in subsection (d). These subject matter and standards shall be published as part of the state chemist's plan for certification of applicators that is filed with the United States Environmental Protection Agency.

(c) The state chemist shall develop the certification examinations covering subject matter and standards identified to the state chemist by the standards committee. Members of this committee shall be appointed by the state chemist and shall include, at a minimum, individuals representing the following:

- (1) The state chemist.
- (2) The Purdue University cooperative extension service.
- (3) The largest pesticide user groups covered by that category of commercial applicators who will take the examination.

A separate standards committee shall be assembled for each examination, but an individual shall be allowed to serve on more than one (1) committee.

(d) Certification shall remain in force from the date of passing the examination through December 31 of the fourth year following the year during which the examination was passed unless revoked or suspended.

- (e) No examination may be attempted more than three

(3) times in any twelve (12) month period. The twelve (12) month period shall commence on the date the first exam failure occurs.

(f) The individual taking the exam shall not consult notes, training materials, books, or any other prohibited materials during the examining period. There shall be no unauthorized talking during the examining period. All examination materials shall be turned in to the examination proctor following the examining session. Failure to comply with these or other specified examination procedures or any unauthorized assistance provided by or received by an individual during the examining period shall be cause for immediate termination of the examining process for all involved individuals and no additional opportunity to take any examinations shall be provided to the involved individuals for a period of five (5) years. (*State Chemist of the State of Indiana; 355 IAC 4-1-2.1; filed Nov 21, 1984, 3:33 p.m.: 8 IR 331; filed Nov 22, 1999, 3:39 p.m.: 23 IR 777; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269*)

### **355 IAC 4-1-3 Commercial applicators; categories of certification and licenses**

**Authority:** IC 15-3-3.6-4; IC 15-3-3.6-5

**Affected:** IC 15-2.1-2-15; IC 15-2.1-2-27; IC 15-3-3.6-10

Sec. 3. Commercial applicators shall be certified and licensed in one (1) or more of the following categories:

(1) Category 1a. Agricultural pest control (plant). This category includes individuals using or supervising the use of pesticides in production of agricultural crops, including, but not limited to:

- (A) feed grains;
- (B) corn;
- (C) soybeans and oil seed; and
- (D) forage;

as well as on grasslands and noncrop agricultural lands.

(2) Category 1b. Agricultural pest control (animal). This category includes individuals using or supervising the use of pesticides other than fumigants and pesticides for the control of wood destroying pests on livestock as defined in IC 15-2.1-2-27 and IC 15-2.1-2-15, and poultry or structures on or in which these animals are confined.

(3) Category 1c. Vegetable, fruit, and nut production pest control. This category includes individuals using or supervising the use of pesticides in production of:

- (A) vegetables;
- (B) fruits; and
- (C) nuts.

(4) Category 2. Forest pest control. This category includes individuals using or supervising the use of

pesticides in forests or forest nurseries.

(5) Category 3a. Ornamental pest control. This category includes individuals using or supervising the use of pesticides in the maintenance and production of ornamental plants.

(6) Category 3b. Turf pest control. This category includes individuals using or supervising the use of pesticides in the maintenance and production of turf and turf related areas, such as driveways and sidewalks.

(7) Category 4. Seed treatment. This category includes individuals using or supervising the use of pesticides on seed stocks for the purpose of controlling pest organisms that are anticipated to attack the plant or germinating seed.

(8) Category 5. Aquatic pest control. This category includes individuals using or supervising the use of pesticides purposefully applied to standing or running water or wetlands.

(9) Category 6. Right-of-way pest control. This category includes individuals using or supervising the use of pesticides in the maintenance of:

- (A) public roads;
- (B) utility rights-of-way;
- (C) pipelines;
- (D) railway rights-of-way;
- (E) parking lots;
- (F) ditch banks; or
- (G) other similar areas.

(10) Category 7a. Residential and institutional pest control. This category includes individuals using or supervising the use of pesticides, other than fumigants and pesticides for the control of wood destroying pests, in or around:

- (A) human dwellings;
- (B) farm structures;
- (C) restaurants;
- (D) warehouses;
- (E) institutional establishments; or
- (F) industrial plants;

except those engaged in the, manufacture or processing of food products or ingredients.

(11) Category 7b. Wood destroying pest control. This category includes individuals using or supervising the use of pesticides, other than fumigants, in or around structures for the prevention, suppression, or control of wood destroying organisms. This category can also include individuals who inspect structures for the purpose of determining the presence or absence of evidence of termites or other wood destroying organisms.

(12) Category 7c. Food processing industry pest control. This category includes individuals using or

supervising the use of pesticides, other than fumigants, in or around structures or portions thereof in which food products are manufactured or processed.

(13) Category 7d. Fumigation. This category includes individuals using or supervising the use of pesticides in the gaseous state.

(14) Category 8. Public health pest control. This category includes governmental employees or other individuals using or supervising the use of pesticides in public health programs such as:

- (A) mosquito abatement operations;
- (B) area vertebrate control programs; and
- (C) similar area pest control activities;

having health or nuisance significance.

(15) Category 11. Aerial application. This category includes those individuals who apply pesticides by means of:

- (A) fixed wing;
- (B) rotary wing;
- (C) ultra light aircraft; or
- (D) lighter-than-air aircraft.

(16) Category LC. Limited certification. This category includes individuals using or supervising the use of a very limited number of specialized pesticides in or on a very limited number of types of sites and situations not adequately covered by other categories listed in this section. This category also can include individuals who only inspect for the purpose of determining the presence or absence of a particular pest or group of pests and the damage caused by those pests, but who neither use nor supervise the use of pesticides nor prescribe or recommend steps for prevention or control of such pests. These limited certifications shall be determined by the state chemist as the state chemist determines to be necessary.

*(State Chemist of the State of Indiana; 355 IAC 4-3-3; Pesticide Use & Application Reg 1, Sec. 3; filed Aug 3, 1976, 4:10 p.m.: Rules and Regs. 1977, p. 440; filed Nov 21, 1984, 3:33 p.m.: 8 IR 332; filed Nov 22, 1999, 3:39 p.m.: 23 IR 778; errata filed Dec 9, 1999, 12:31 p.m.: 23 IR 814; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269)*

### **355 IAC 4-1-4 Private applicators; certification standards and procedures**

**Authority:** IC 15-3-3.6-4; IC 15-3-3.6-5

**Affected:** IC 15-3-3.5-1; IC 15-3-3.6

Sec. 4. (a) Initial certification of private applicators (IC 15-3-3.5-1(6)) shall be by written examination as set forth in subsection (b). Minimum passing score on all examinations administered by the state chemist shall be seventy-five percent (75%) unless another minimum

passing score has been established by the state chemist after consideration of the recommendations of the standards committee described in subsection (c).

(b) Each certified private applicator shall have passed a private applicator examination or an appropriate commercial applicator examination covering, at a minimum, subject matter and standards that have been identified to the state chemist by the standards committee described in subsection (c) or section 2.1(d) of this rule. The state chemist shall determine which commercial applicator examination will be considered appropriate for the private applicator's proposed use of pesticides.

(c) The state chemist shall develop the certification examinations covering subject matter and standards identified to the state chemist by the standards committee. Members of this committee shall be appointed by the state chemist and shall include, at a minimum, individuals representing the following:

- (1) The state chemist.
- (2) The Purdue University cooperative extension service.
- (3) The largest pesticide user groups covered by that category of private applicators who will take the examination.

(d) Certification and the permit for private applicators shall remain valid from the date of passing the examination and paying the permit fee through December 31 of the fourth year following the year during which the examination was passed. *(State Chemist of the State of Indiana; 355 IAC 4-1-4; filed Nov 21, 1984, 3:33 p.m.: 8 IR 334; filed Nov 22, 1999, 3:39 p.m.: 23 IR 780; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269)*

### **Rule 2. Site Awareness and Direct Supervision of Non-Certified Applicators**

355 IAC 4-2-1	Definitions
355 IAC 4-2-2	Pesticide use by noncertified persons
355 IAC 4-2-3	On-site supervision of use
355 IAC 4-2-4	Application instructions ( <i>Repealed</i> )
355 IAC 4-2-5	Applicability of supervision requirements
355 IAC 4-2-6	Certified and noncertified applicators' responsibilities
355 IAC 4-2-7	Limit on number of noncertified individuals to be supervised
355 IAC 4-2-8	Technician registration requirements

### **355 IAC 4-2-1 Definitions**

**Authority:** IC 15-3-3.5-11; IC 15-3-3.6-4; IC 15-3-3.6-10.1

**Affected:** IC 15-3-3.6-2

Sec. 1. The following definitions apply throughout this rule:

- (1) "Competent person" means a person who:
  - (A) has the ability to read and comprehend written

instructions, including the text of pesticide labels;

(B) is sixteen (16) years of age or over; and

(C) is a registered technician.

(2) "Direct supervision" means either of the following:

(A) The physical presence of the supervising certified applicator at the work site under circumstances that permit continuous direct voice contact with the noncertified individual.

(B) The supervising certified applicator has provided the noncertified competent person the following:

(i) Written instructions covering site-specific precautions to prevent injury to persons or the environment or damage to property.

(ii) A copy of the labels of all pesticide products to be used.

(iii) The means and instructions to establish direct voice communication during the use of the pesticide with the supervising certified applicator.

(iv) All personal protective equipment and instructions on proper use required by the labels of the pesticide products for the uses being performed.

(3) "Registered technician" means a noncertified person who, having met the requirements of section 8 of this rule, is registered by the state chemist and thereby is authorized to engage in pesticide use and related activities while working under the direct supervision of a certified applicator.

(4) "Work site" means any location at which pesticides are used as defined in IC 15-3-3.6-2(37).

(5) "Written instructions" means a written or printed site assessment fact sheet or similar document that shall be reviewed by the noncertified applicator prior to each pesticide application. The required elements on the site assessment fact sheet shall be industry specific and developed by the state chemist in consultation with the appropriate certified applicator industry.

*(State Chemist of the State of Indiana; Pesticide Use & Application Reg 2, Sec 1; filed Aug 3, 1976, 4:10 p.m.: Rules and Regs. 1977, p. 442; filed Apr 21, 1982, 3:45 p.m.: 5 IR 1191; filed Sep 20, 2001, 3:54 p.m.: 25 IR 376; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269)*

### **355 IAC 4-2-2 Pesticide use by noncertified persons**

**Authority:** IC 15-3-3.5-11; IC 15-3-3.6-4

**Affected:** IC 15-3-3.6-7

Sec. 2. Pesticide may be used by a noncertified person working under the direct supervision of a certified applicator. All persons conducting use of pesticides for hire by aerial application shall be certified. *(State Chemist of the State of Indiana; Pesticide Use & Application*

*Reg 2, Sec 2; filed Aug 3, 1976, 4:10 p.m.: Rules and Regs. 1977, p. 443; filed Apr 21, 1982, 3:45 p.m.: 5 IR 1192; filed Sep 20, 2001, 3:54 p.m.: 25 IR 376; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269)*

### **355 IAC 4-2-3 On-site supervision of use**

**Authority:** IC 15-3-3.5-11; IC 15-3-3.6-4

**Affected:** IC 15-3-3.6

Sec. 3. The supervising certified applicator shall be physically present as defined in section 1(2)(A) of this rule if:

(1) the label of the pesticide being used so stipulates;

(2) the noncertified individual has had no prior experience with either the pesticide or the application methodology in use; or

(3) the noncertified individual is not competent as defined in section 1(1) of this rule.

*(State Chemist of the State of Indiana; Pesticide Use & Application Reg 2, Sec 3; filed Aug 3, 1976, 4:10 p.m.: Rules and Regs. 1977, p. 443; filed Apr 21, 1982, 3:45 p.m.: 5 IR 1192; filed Sep 20, 2001, 3:54 p.m.: 25 IR 376; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269)*

### **355 IAC 4-2-4 Application instructions (Repealed)**

Sec. 4. *(Repealed by State Chemist of the State of Indiana; filed Sep 20, 2001, 3:54 p.m.: 25 IR 378)*

### **355 IAC 4-2-5 Applicability of supervision requirements**

**Authority:** IC 15-3-3.5-11; IC 15-3-3.6-4

**Affected:** IC 15-3-3.6

Sec. 5. The requirements for direct supervision of noncertified individuals shall apply to the following:

(1) Use of all pesticides by any person required by IC 15-3-3.6 to be licensed as one (1) of the following:

(A) A pesticide business.

(B) A for hire applicator.

(C) A not for hire applicator.

(D) A public applicator.

(2) Use of restricted use pesticides.

*(State Chemist of the State of Indiana; Pesticide Use & Application Reg 2, Sec 5; filed Aug 3, 1976, 4:10 p.m.: Rules and Regs. 1977, p. 443; filed Apr 21, 1982, 3:45 p.m.: 5 IR 1192; filed Sep 20, 2001, 3:54 p.m.: 25 IR 377; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269)*

### **355 IAC 4-2-6 Certified and noncertified applicators' responsibilities**

**Authority:** IC 15-3-3.5-11; IC 15-3-3.6-4

**Affected:** IC 15-3-3.6

Sec. 6. Certified supervising applicators and noncertified individuals shall be responsible for the following:

(1) A certified supervising applicator shall provide the items listed in section 1(2)(B) of this rule to the noncertified individual.

(2) A noncertified individual shall:

(A) be in possession of the items listed in section 1(2)(B) of this rule;

(B) carry out the instructions of the supervising certified applicator; and

(C) upon request, produce the items listed in section 1(2)(B) of this rule for inspection by the state chemist.

*(State Chemist of the State of Indiana; Pesticide Use & Application Reg 2, Sec 6; filed Apr 21, 1982, 3:45 p.m.: 5 IR 1192; filed Sep 20, 2001, 3:54 p.m.: 25 IR 377; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269)*

### **355 IAC 4-2-7 Limit on number of noncertified individuals to be supervised**

**Authority:** IC 15-3-3.5-11; IC 15-3-3.6-4

**Affected:** IC 15-3-3.6

Sec. 7. (a) A certified applicator providing direct supervision as described in section 1(2)(B) of this rule may supervise no more than ten (10) noncertified individuals unless an emergency exemption as provided in subsection (b) has been granted by the state chemist.

(b) A certified applicator may apply for and the state chemist may grant an emergency exemption for up to sixty (60) days from the date of application by the certified applicator to allow for temporary supervision of more than ten (10) noncertified individuals.

(c) The state chemist will determine if the emergency exemption as applied for is justifiable and reasonable to grant. *(State Chemist of the State of Indiana; 355 IAC 4-2-7; filed Sep 20, 2001, 3:54 p.m.: 25 IR 377; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269)*

### **355 IAC 4-2-8 Technician registration requirements**

**Authority:** IC 15-3-3.5-11; IC 15-3-3.6-4

**Affected:** IC 15-3-3.6-12.1

Sec. 8. (a) To become a registered technician, an individual must do the following:

(1) Pass the commercial applicator core examination described in 355 IAC 4-1-2.1(b) or, if a turf technician, pass either the core examination or the registered technician examination described in 355 IAC 4-6-4.

(2) Submit an application on a form provided by the state chemist. This form must be signed by both the applicant and the responsible certified applicator employed at the applicant's business location.

(3) Submit the thirty dollar (\$30) technician registration fee.

(b) Registration shall remain in force from the date of passing the examination through December 31 of the fourth year following the year during which the examination was passed unless revoked or suspended.

(c) The registration period may be extended indefinitely for an additional five (5) years if the registered technician accumulates at least eight (8) continuing registration credits by attending at least two (2) state chemist approved continuing registration programs while the registration is in force.

(d) Annual registration credentials shall expire on December 31 unless renewed by a payment of a thirty dollar (\$30) renewal fee by that date. Renewal after December 31 shall include a late fee of thirty dollars (\$30) as established by IC 15-3-3.6-12.1 in addition to the thirty dollar (\$30) renewal fee.

(e) The registration credential shall be in the possession of the registered technician at all times the technician is at a work site as defined in section 1(4) of this rule. *(State Chemist of the State of Indiana; 355 IAC 4-2-8; filed Sep 20, 2001, 3:54 p.m.: 25 IR 377; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269)*

### **Rule 3. Financial Responsibility of Commercial Applicators**

355 IAC 4-3-1	Proof of financial responsibility; bond
355 IAC 4-3-2	Minimum coverage
355 IAC 4-3-3	Coverage
355 IAC 4-3-4	Official form

### **355 IAC 4-3-1 Proof of financial responsibility; bond**

**Authority:** IC 15-3-3.6-4

**Affected:** IC 15-3-3.6-6; IC 15-3-3.6-13; IC 27-1-3-20

Sec. 1. Applicants for licensure as a pesticide business shall furnish evidence of financial responsibility acceptable to the state chemist prior to the issuance and upon annual renewal of such license or upon expiration of the proof of insurance on file with the state chemist. This requirement may be satisfied by:

(1) liability insurance or a surety bond issued by a company holding a certificate of authority issued by the Indiana department of insurance under IC 27-1-3-20; or

(2) certificate of financial responsibility issued by an institution licensed to do business in the state by the

Indiana department of financial institutions.  
(*State Chemist of the State of Indiana; Pesticide Use & Application Reg 3, Sec 1; filed Aug 3, 1976, 4:10 p.m.: Rules and Regs. 1977, p. 443; filed Jan 10, 1995, 8:45 a.m.: 18 IR 1238; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269*)

### 355 IAC 4-3-2 Minimum coverage

**Authority:** IC 15-3-3.6-4

**Affected:** IC 15-3-3.6-6; IC 15-3-3.6-13

Sec. 2. Minimum coverage requirements shall be as follows:

- (1) General liability, three hundred thousand dollars (\$300,000) combined single limit of liability for bodily injury and property damage. The limit is to apply to each occurrence.
- (2) Vehicle liability, three hundred thousand dollars (\$300,000) limit per accident. This shall be required only if the insured owns, leases, rents, maintains, or uses any vehicle in connection with the use of pesticides. This type of coverage is not required if already covered by the general liability insurance.
- (3) Watercraft liability, three hundred thousand dollars (\$300,000) limit per accident. This shall be required only if the insured owns, leases, rents, maintains, or uses any watercraft in connection with the use of pesticides. This type of coverage is not required if already covered by the general liability insurance.
- (4) Aircraft liability, either of the following shall be required only if the insured owns, leases, rents, maintains, or uses any aircraft in connection with the use of pesticides:

(A) Three hundred thousand dollars (\$300,000) limit per accident.

(B) Both:

- (i) one hundred thousand dollars (\$100,000) bodily injury per person and three hundred thousand dollars (\$300,000) per accident; and
- (ii) one hundred thousand dollars (\$100,000) property damage per accident and one hundred thousand dollars (\$100,000) aggregate.

(*State Chemist of the State of Indiana; Pesticide Use & Application Reg 3, Sec 2; filed Aug 3, 1976, 4:10 p.m.: Rules and Regs. 1977, p. 444; filed Jan 10, 1995, 8:45 a.m.: 18 IR 1239; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269*)

### 355 IAC 4-3-3 Coverage

**Authority:** IC 15-3-3.6-4

**Affected:** IC 15-3-3.6-6; IC 15-3-3.6-13

Sec. 3. General liability coverage shall be conditioned

to provide coverage for damage to persons or property outside of the insured's care, custody, and control resulting from wind drift or overspray of pesticides. (*State Chemist of the State of Indiana; Pesticide Use & Application Reg 3, Sec 3; filed Aug 3, 1976, 4:10 p.m.: Rules and Regs. 1977, p. 444; filed Jan 10, 1995, 8:45 a.m.: 18 IR 1239; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269*)

### 355 IAC 4-3-4 Official form

**Authority:** IC 15-3-3.6-4

**Affected:** IC 15-3-3.6-6; IC 15-3-3.6-13

Sec. 4. Proof of financial responsibility shall be provided by the issuing company or institution on forms determined to be acceptable by the state chemist. Acceptable forms shall include, but may not be limited to, a certificate of insurance. (*State Chemist of the State of Indiana; Pesticide Use & Application Reg 3, Sec 4; filed Aug 3, 1976, 4:10 p.m.: Rules and Regs. 1977, p. 444; filed Jan 10, 1995, 8:45 a.m.: 18 IR 1239; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269*)

### Rule 4. Records

- 355 IAC 4-4-1 Commercial applicator use records
- 355 IAC 4-4-1.5 Private applicator use records
- 355 IAC 4-4-2 Record inspection; availability
- 355 IAC 4-4-3 Restricted pesticide dealers; records

### 355 IAC 4-4-1 Commercial applicator use records

**Authority:** IC 15-3-3.6-4

**Affected:** IC 15-3-3.6-19

Sec. 1. (a) All commercial applicators or their employees shall keep and maintain records of all applications of pesticides classified for restricted use. Such records shall provide the following:

- (1) Name and address of customer and address or location description of site of application if different.
- (2) Name and certification number (or certification number of the supervising certified applicator) of the person making the application.
- (3) Date of application (month, day, and year).
- (4) Type of plants, crop, animals, commodity, stored product, or sites treated and principal pests to be controlled.
- (5) Acreage, area, or number of plants or animals treated or other appropriate description.
- (6) Pesticide applied, including name of the manufacturer, EPA registration number, and brand name (including formulation if specifically identified in the brand name).
- (7) Amount used, expressed as either:
  - (A) concentrate—give total quantity of formulation

applied (pounds, gallons, etc.); or

(B) diluted mixture (ready to use)—give total amount applied and active ingredient concentration (percentage).

(b) The records to be maintained under this section shall be recorded by the thirtieth day from the date of application and be kept and maintained for a period of two (2) years.

(c) The records to be maintained under this section shall be maintained collectively.

(d) Written or electronic information which includes all of the items in subsection (a) and used to create the records shall be maintained from the date of application until the collective written record required is generated.

(e) A commercial applicator shall, within thirty (30) days of a restricted use pesticide application, provide a copy of records maintained under this section to the person for whom the restricted use pesticide was applied. Such person shall keep this copy for two (2) years after the date of the application. (*State Chemist of the State of Indiana; Pesticide Use & Application Reg 4, Sec 1; filed Aug 3, 1976, 4:10 p.m.: Rules and Regs. 1977, p. 444; filed Nov 3, 1993, 9:00 a.m.: 17 IR 339; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269*)

### **355 IAC 4-4-1.5 Private applicator use records**

**Authority:** IC 15-3-3.6-4

**Affected:** IC 15-3-3.6

Sec. 1.5. (a) All private applicators or their employees shall keep and maintain records of all applications of pesticides classified for restricted use. Such records shall provide the following:

- (1) Address or location description of site of application.
- (2) Name and certification number (or certification number of the supervising certified applicator) of the person making the application.
- (3) Date of application (month, day, and year).
- (4) Type of plants, crop, animals, commodity, stored product, or sites treated and principal pests to be controlled.
- (5) Acreage, area, or number of plants or animals treated or other appropriate description.
- (6) Pesticide applied, including name of the manufacturer, EPA registration number, and brand name (including formulation if specifically identified in the brand name).
- (7) Amount used, expressed as either:
  - (A) concentrate—give total quantity of formulation applied (pounds, gallons, etc.); or
  - (B) diluted mixture (ready to use)—give total amount applied and active ingredient concentration (percentage).

(b) The records to be maintained under this section shall be recorded by the thirtieth day from the date of application and be kept and maintained for a period of two (2) years.

(c) Written or electronic information which includes all of the items in subsection (a) and used to create the records shall be maintained from the date of application until the collective written record required is generated. (*State Chemist of the State of Indiana; 355 IAC 4-4-1.5; filed Nov 3, 1993, 9:00 a.m.: 17 IR 339; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269*)

### **355 IAC 4-4-2 Record inspection; availability**

**Authority:** IC 15-3-3.6-4

**Affected:** IC 15-3-3.6

Sec. 2. (a) All required records and information shall, upon written or oral request, be made available for inspection and copying by the state chemist or his authorized agent. The person requesting the records must present his or her credentials prior to the release of records.

(b) No government agency shall release information obtained under this rule that would directly or indirectly reveal the identity of producers of commodities to which restricted use pesticides have been applied. However, information collected by the state chemist during the course of a complaint or damage investigation shall not be subject to this restriction on release.

(c) When a licensed health care professional determines that information required to be maintained as part of these records is necessary to provide medical treatment to an individual who may have been exposed to the pesticide, the state chemist or the private or commercial applicator shall provide the requested information.

(d) As used in this rule, “licensed health care professional” means a physician, nurse, emergency medical technician, or other qualified individual licensed by a state to provide medical treatment.

(e) No licensed health care professional shall release any record or information from any record obtained under subsection (c) except as necessary to provide medical treatment to an individual who may have been exposed to the restricted use pesticide for which the record is maintained. (*State Chemist of the State of Indiana; Pesticide Use & Application Reg 4, Sec 2; filed Aug 3, 1976, 4:10 p.m.: Rules and Regs. 1977, p. 445; filed Nov 3, 1993, 9:00 a.m.: 17 IR 340; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269*)

### **355 IAC 4-4-3 Restricted pesticide dealers; records**

**Authority:** IC 15-3-3.5-11; IC 15-3-3.6-4

**Affected:** IC 15-3-3.5-10; IC 15-3-3.6-12; IC 15-3-3.6-19

Sec. 3. Dealers selling or distributing pesticides with uses classified as restricted shall be registered with the Office of the State Chemist each year. These dealers shall record for each transaction involving a restricted use pesticide the following:

- (a) Name, address and certificate number of the certified applicator for whom the purchase is being made.
- (b) Date
- (c) Identity of product (manufacturer, EPA registration number, and brand name).
- (d) Amount of product sold.
- (e) Signature of person presenting the certification credentials. These records shall be maintained for two years from the date of sale.

*(State Chemist of the State of Indiana; Pesticide Use & Application Reg 4, Sec 3; filed Aug 3, 1976, 4:10 pm: Rules and Regs. 1977, p. 445; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269)*

### **Rule 5. Licensed Applicators (for Hire) and Registered Technicians; Qualifications, Training, and Supervision**

355 IAC 4-5-1	Definitions
355 IAC 4-5-2	Responsibilities of licensed applicators for hire
355 IAC 4-5-3	Eligibility to take the Category 7b certification exam
355 IAC 4-5-4	Technician registration requirements
355 IAC 4-5-5	Record submission process
355 IAC 4-5-6	Supervision of uncertified employees
355 IAC 4-5-7	New resident applicators; temporary license <i>(Repealed)</i>
355 IAC 4-5-8	Nonresident applicators; reciprocity <i>(Repealed)</i>
355 IAC 4-5-9	Denial, suspension, or revocation of technician registration <i>(Repealed)</i>
355 IAC 4-5-10	Denial of the opportunity to take the category 7b (355 IAC 4-1-3) examination <i>(Repealed)</i>
355 IAC 4-5-11	Exemption
355 IAC 4-5-12	Effective date <i>(Repealed)</i>

#### **355 IAC 4-5-1 Definitions**

**Authority:** IC 15-3-3.6-4; IC 15-3-3.6-5  
**Affected:** IC 15-3-3.6

Sec. 1. (a) As used in this rule, “licensed applicator for hire” means any licensed, certified individual who is employed by a licensed pesticide business to use or to supervise the use of any pesticide by the firm and, for purposes of this rule, is certified in Category 7b.

(b) As used in this rule, “registered technician” means an uncertified employee of a licensed business who, having met the requirements stated in section 4 of this

rule, is registered by the state chemist and thereby authorized to carry out responsibilities in the business while working under the direct supervision of a licensed applicator for hire. *(State Chemist of the State of Indiana; 355 IAC 4-5-1; filed Feb 17, 1986, 3:00 p.m.: 9 IR 1570, eff Apr 1, 1986; filed Sep 10, 1999, 4:41 p.m.: 23 IR 302; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269)*

#### **355 IAC 4-5-2 Responsibilities of licensed applicators for hire**

**Authority:** IC 15-3-3.6-4; IC 15-3-3.6-5  
**Affected:** IC 15-3-3.6-16.1

Sec. 2. Licensed applicators for hire shall be required to do the following:

- (1) Develop records for all for hire termiticide applications performed by that licensed applicator or registered technician operating under that licensed applicator’s direct supervision as described in 355 IAC 4-2.
- (2) Ensure that the records required under this section include the following:

- (A) A copy of the contract for the treated structure. The contract shall be declared confidential as provided for in IC 15-3-3.6-16.1.
- (B) A graph or diagram of the treated structure.
- (C) Accurate structural dimensions of the treated structure.
- (D) Treatment specifications.
- (E) U.S. Environmental Protection Agency product registration number for the termiticide used.
- (F) Dilution rate of the termiticide.
- (G) Volume of termiticide use dilution applied.
- (H) Explanation for any label directed treatment procedures that were not performed.
- (I) Name and registration number of the technician.
- (J) Name and license number of the applicator or supervisor if treatment was performed by a registered technician.
- (K) Day, month, and year of treatment.

- (3) Keep and maintain the records required under this section for a period of five (5) years from the date of treatment.
- (4) Provide the registered technicians under the licensed applicator’s supervision with written site-specific treatment instructions that include the following:

- (A) A copy of the labels of all products to be used.
- (B) The information required in subdivision (2).
- (5) Review and verify, by licensed applicator’s signature, the site-specific treatment instructions required in subdivision (4) prior to the treatment.

*(State Chemist of the State of Indiana; 355 IAC 4-5-2; filed Feb 17, 1986, 3:00 p.m.: 9 IR 1570, eff Apr 1, 1986;)*

*filed Sep 10, 1999, 4:41 p.m.: 23 IR 303; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269)*

### **355 IAC 4-5-3 Eligibility to take the Category 7b certification exam**

**Authority:** IC 15-3-3.6-4; IC 15-3-3.6-5

**Affected:** IC 15-3-3.6

Sec. 3. To become eligible to take the Category 7b certification examination as described in 355 IAC 4-1, an individual must first complete one (1) of the following:

- (1) An approved program at the Purdue University Structural Pest Control Training Center or other program the state chemist has reviewed and determined to be of comparable quality and scope.
- (2) One (1) year of experience as an active Category 7b certified applicator or registered technician in Indiana or another state having a comparable and verifiable program and completion of the record submission process described in section 5 of this rule. (*State Chemist of the State of Indiana; 355 IAC 4-5-3; filed Feb 17, 1986, 3:00 p.m.: 9 IR 1570, eff Apr 1, 1986; filed Sep 10, 1999, 4:41 p.m.: 23 IR 303; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269*)

### **355 IAC 4-5-4 Technician registration requirements**

**Authority:** IC 15-3-3.6-4; IC 15-3-3.6-5

**Affected:** IC 15-3-3.6-12.1

Sec. 4. (a) To become a registered technician, an individual must do the following:

- (1) Pass the registered technician written examination or satisfactorily complete a training program as referenced in section 3(1) of this rule.
- (2) Submit an application on a form provided by the state chemist. This form must be signed by both the applicant and a responsible licensed applicator for hire employed at the applicant's business location.
- (3) Submit the thirty dollar (\$30) technician registration fee unless the individual is currently a licensed applicator for hire in Indiana in a category other than Category 7b.
- (b) The state chemist shall develop the registered technician examination covering subject matter and standards identified to the state chemist by a standards committee. Members of this committee shall be appointed by the state chemist and shall include, at a minimum, individuals representing the following:
  - (1) The state chemist.
  - (2) The Purdue University Cooperative Extension Service.
  - (3) Licensed applicators for hire.

(4) Registered technicians.

(c) The minimum passing score for the registered technician examination shall be established by the state chemist after consideration of recommendations from the standards committee as described in subsection (b) or shall default to seventy-five percent (75%) if the standards committee has not made a recommendation to the state chemist.

(d) No examination may be attempted more than three (3) times in any twelve (12) month period. The twelve (12) month period shall commence on the date the first exam failure occurs.

(e) Registration of each registered technician shall expire on December 31 unless renewed by payment of a thirty dollar (\$30) renewal fee by that date. An individual renewing an applicator license for hire in Indiana in a category other than Category 7b shall not be required to pay this renewal fee. Renewal after December 31 shall include a late fee of thirty dollars (\$30) as established by IC 15-3-3.6-12.1 in addition to the thirty dollar (\$30) renewal fee.

(f) The registration credential shall be in the possession of the registered technician at all times the technician is at a work site as defined in 355 IAC 4-2-1(c).

(g) The steps specified in subsection (a) shall be required for reinstatement of registration as a technician of any individual who has been inactive or unregistered for a period of two (2) years or more. (*State Chemist of the State of Indiana; 355 IAC 4-5-4; filed Feb 17, 1986, 3:00 p.m.: 9 IR 1570, eff Apr 1, 1986; filed Sep 10, 1999, 4:41 p.m.: 23 IR 303; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269*)

### **355 IAC 4-5-5 Record submission process**

**Authority:** IC 15-3-3.6-4; IC 15-3-3.6-5

**Affected:** IC 15-3-3.6

Sec. 5. (a) Registered technicians attempting to become eligible to take the certification examination by the process referenced in section 3(2) of this rule must accomplish the following:

- (1) Treat a minimum of fifteen (15) properties in which the variety and distribution of construction styles, where subterranean termites are the pest organism, shall include the following:
  - (A) Concrete slab.
  - (B) Crawl space.
  - (C) Basement.
  - (D) Preconstruction treatment.
  - (E) Private water supply.
- (2) Submit to the state chemist records for the treatments specified in subdivision (1) that include the information in section 2(2) of this rule.

(b) Incomplete or inadequate records shall not be counted toward totals required in subsection(a)(1). (*State Chemist of the State of Indiana*; 355 IAC 4-5-5; filed Feb 17, 1986, 3:00 p.m.: 9 IR 1570, eff Apr 1, 1986; filed Sep 10, 1999, 4:41 p.m.: 23 IR 305; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269)

### **355 IAC 4-5-6 Supervision of uncertified employees**

**Authority:** IC 15-3-3.6-4; IC 15-3-3.6-5

**Affected:** IC 15-3-3.6

Sec. 6. Uncertified employees must use pesticides for the control of wood destroying organisms in or around structures belonging to another only under supervision of a licensed applicator for hire as follows:

(1) Registered technicians shall operate under direct supervision as defined in 355 IAC 4-2.

(2) Uncertified and unregistered employees shall operate under the direct on-site supervision of a licensed applicator for hire as provided for in 355 IAC 4-2-1(b)(1).

(*State Chemist of the State of Indiana*; 355 IAC 4-5-6; filed Feb 17, 1986, 3:00 p.m.: 9 IR 1570, eff Apr 1, 1986; filed Sep 10, 1999, 4:41 p.m.: 23 IR 306; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269)

### **355 IAC 4-5-7 New resident applicators; temporary license (Repealed)**

Sec. 7. (*Repealed by State Chemist of the State of Indiana*; filed Sep 10, 1999, 4:41 p.m.: 23 IR 306)

### **355 IAC 4-5-8 Nonresident applicators; reciprocity (Repealed)**

Sec. 8. (*Repealed by State Chemist of the State of Indiana*; filed Sep 10, 1999, 4:41 p.m.: 23 IR 306)

### **355 IAC 4-5-9 Denial, suspension, or revocation of technician registration (Repealed)**

Sec. 9. (*Repealed by State Chemist of the State of Indiana*; filed Sep 10, 1999, 4:41 p.m.: 23 IR 306)

### **355 IAC 4-5-10 Denial of the opportunity to take the category 7b (355 IAC 4-1-3) examination (Repealed)**

Sec. 10. (*Repealed by State Chemist of the State of Indiana*; filed Sep 10, 1999, 4:41 p.m.: 23 IR 306)

### **355 IAC 4-5-11 Exemption**

**Authority:** IC 15-3-3.6-4; IC 15-3-3.6-5

**Affected:** IC 15-3-3.6

Sec. 11. All persons having completed the requirements for certification and licensing as a licensed applicator for hire and having been issued a valid certification as of the effective date of this rule are exempt from section 3 of this rule. (*State Chemist of the State of Indiana*; 355 IAC 4-5-11; filed Feb 17, 1986, 3:00 p.m.: 9 IR 1573, eff Apr 1, 1986; filed Sep 10, 1999, 4:41 p.m.: 23 IR 306; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269)

### **355 IAC 4-5-12 Effective date (Repealed)**

Sec. 12. (*Repealed by State Chemist of the State of Indiana*; filed Sep 10, 1999, 4:41 p.m.: 23 IR 306)

### **Rule 6. Training Requirements for Licensed Applicators and Registered Technicians; Category 3b**

355 IAC 4-6-1	Definitions
355 IAC 4-6-2	Licensed applicators for hire requirements
355 IAC 4-6-3	Applicator license requirements
355 IAC 4-6-4	Technician registration requirements
355 IAC 4-6-5	Advanced training program ( <i>Repealed</i> )
355 IAC 4-6-6	Supervision of uncertified employees
355 IAC 4-6-7	New resident applicators for hire; requirements ( <i>Repealed</i> )
355 IAC 4-6-8	Nonresident applicators; requirements ( <i>Repealed</i> )
355 IAC 4-6-9	Denial of application for technician registration ( <i>Repealed</i> )
355 IAC 4-6-10	Exemption
355 IAC 4-6-11	Effective date ( <i>Repealed</i> )

### **355 IAC 4-6-1 Definitions**

**Authority:** IC 15-3-3.6-5

**Affected:** IC 15-3-3.6

Sec. 1. The following definitions apply throughout this rule:

(1) "Licensed applicator for hire" means any licensed certified individual who is employed by a licensed pesticide business to use or to supervise the use of any pesticide by the business and, for purposes of this rule, is certified in Category 3b.

(2) "Registered technician" means an uncertified person who, having met the requirements of section 4 of this rule, is registered by the state chemist and thereby is authorized to engage in pesticide use and related activities for his or her employer while working under the direct supervision of a licensed applicator for hire.

(3) "Turf pest" means any organism that inhabits or feeds upon the turf layer and root zone created by growing plants (usually grasses) and their matted roots

and by so doing alters the vigor or appearance of the turf.

*(State Chemist of the State of Indiana; 355 IAC 4-6-1; filed Jan 13, 1988, 4:47 p.m.: 11 IR 1760; filed Jan 9, 1992, 3:00 p.m.: 15 IR 702; filed Jan 5, 2000, 3:54 p.m.: 23 IR 1100; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269)*

### **355 IAC 4-6-2 Licensed applicators for hire requirements**

**Authority:** IC 15-3-3.6-5

**Affected:** IC 15-3-3.6

Sec. 2. (a) Licensed applicators for hire shall be required to do the following:

(1) Provide the registered technicians under the licensed applicator's supervision with written site-specific pesticide use instructions that include the following:

(A) A copy of the labels of all pesticide products to be used.

(B) The address or reasonable description of the physical location at which the pesticides will be used.

(C) The name and license number of the certified supervisor.

(2) Equip the registered technicians under the licensed applicator's supervision with all personal protective equipment required on the labels of the products and for the uses by the technician.

(3) Ensure that the registered technicians under the licensed applicator's supervision are able to establish direct voice communication with the licensed applicator when pesticide use is in progress.

*(State Chemist of the State of Indiana; 355 IAC 4-6-2; filed Jan 13, 1988, 4:47 p.m.: 11 IR 1761; filed Jan 9, 1992, 3:00 p.m.: 15 IR 703; filed Jan 5, 2000, 3:54 p.m.: 23 IR 1100; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269)*

### **355 IAC 4-6-3 Applicator license requirements**

**Authority:** IC 15-3-3.6-5

**Affected:** IC 15-3-3.6

Sec. 3. To become a licensed applicator for hire, an individual must do the following:

(1) Complete one (1) of the following:

(A) A practical hands-on training program reviewed and approved by the state chemist.

(B) Ninety (90) days of experience as an active Category 3b certified applicator or registered technician in Indiana or any state having a comparable and verifiable program as determined by the state chemist.

(C) Completion of a formal post high school two (2) year minimum turf program or a related program that includes turf production in its curriculum. An official transcript must be submitted to the state chemist for approval to qualify by this method.

(D) One (1) year of experience as an active licensed applicator in Indiana or in another state.

(2) Complete the examination process for certification as described in 355 IAC 4-1-2.1.

*(State Chemist of the State of Indiana; 355 IAC 4-6-3; filed Jan 13, 1988, 4:47 p.m.: 11 IR 1761; filed Jan 9, 1992, 3:00 p.m.: 15 IR 703; filed Jan 5, 2000, 3:54 p.m.: 23 IR 1101; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269)*

### **355 IAC 4-6-4 Technician registration requirements**

**Authority:** IC 15-3-3.6-5

**Affected:** IC 15-3-3.6-12.1

Sec. 4. (a) To become a registered technician, an individual must do the following:

(1) Pass the registered technician written examination or satisfactorily complete a training program as referenced in section 3(1) of this rule.

(2) Submit an application on a form provided by the state chemist. This form must be signed by both the applicant and a responsible licensed applicator for hire employed at the applicant's business location.

(3) Submit the thirty dollar (\$30) technician registration fee unless the individual is currently a licensed applicator for hire in Indiana in a category other than Category 3b.

(b) The state chemist shall develop the registered technician examination covering subject matter and standards identified to the state chemist by a standards committee. Members of this committee shall be appointed by the state chemist and shall include, at a minimum, individuals representing the following:

(1) The state chemist.

(2) The Purdue University cooperative extension service.

(3) Licensed applicators for hire.

(4) Registered technicians.

(c) The minimum passing score for the registered technician examination shall:

(1) be established by the state chemist after consideration of recommendations from the standards committee as described in subsection (b); or

(2) default to seventy-five percent (75%) if the standards committee has not made a recommendation to the state chemist.

(d) No examination may be attempted more than three

(3) times in any twelve (12) month period. The twelve (12) month period shall commence on the date the first exam failure occurs.

(e) Registration of each registered technician shall expire on December 31 unless renewed by payment of a thirty dollar (\$30) renewal fee by that date. An individual renewing an applicator license for hire in Indiana in a category other than Category 3b shall not be required to pay this renewal fee. Renewal after December 31 shall include a late fee of thirty dollars (\$30) as required by IC 15-3-3.6-12.1 in addition to the thirty dollar (\$30) renewal fee.

(f) The registration credential shall be in the possession of the registered technician at all times the technician is at a work site as defined in 355 IAC 4-2-1(c). (*State Chemist of the State of Indiana; 355 IAC 4-6-4; filed Jan 13, 1988, 4:47 p.m.: 11 IR 1761; filed Jan 9, 1992, 3:00 p.m.: 15 IR 704; filed Jan 5, 2000, 3:54 p.m.: 23 IR 1101; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269*)

### **355 IAC 4-6-5 Advanced training program (Repealed)**

Sec. 5. (*Repealed by State Chemist of the State of Indiana; filed Jan 9, 1992, 3:00 p.m.: 15 IR 705*)

### **355 IAC 4-6-6 Supervision of uncertified employees**

Authority: IC 15-3-3.6-5  
Affected: IC 15-3-3.6

Sec. 6. Uncertified employees must use pesticides on turf belonging to another only under supervision of a licensed applicator for hire as follows:

- (1) Registered technicians shall operate under direct supervision as defined in 355 IAC 4-2-1.
- (2) Uncertified and unregistered employees shall operate under the direct on-site supervision of a licensed applicator for hire only as provided for in 355 IAC 4-2-1(b)(1).

(*State Chemist of the State of Indiana; 355 IAC 4-6-6; filed Jan 13, 1988, 4:47 p.m.: 11 IR 1763; filed Jan 5, 2000, 3:54 p.m.: 23 IR 1103; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269*)

### **355 IAC 4-6-7 New resident applicators for hire; requirements (Repealed)**

Sec. 7. (*Repealed by State Chemist of the State of Indiana; filed Jan 5, 2000, 3:54 p.m.: 23 IR 1103*)

### **355 IAC 4-6-8 Nonresident applicators; requirements (Repealed)**

Sec. 8. (*Repealed by State Chemist of the State of Indiana; filed Jan 5, 2000, 3:54 p.m.: 23 IR 1103*)

### **355 IAC 4-6-9 Denial of application for technician registration (Repealed)**

Sec. 9. (*Repealed by State Chemist of the State of Indiana; filed Jan 5, 2000, 3:54 p.m.: 23 IR 1103*)

### **355 IAC 4-6-10 Exemption**

Authority: IC 15-3-3.6-5  
Affected: IC 15-3-3.6

Sec. 10. All persons having completed the requirements for certification and licensing as a licensed applicator for hire and having been issued a valid certification as of the effective date of this rule are exempt from the requirements of section 4 of this rule. (*State Chemist of the State of Indiana; 355 IAC 4-6-10; filed Jan 13, 1988, 4:47 p.m.: 11 IR 1764; filed Jan 9, 1992, 3:00 p.m.: 15 IR 705; filed Jan 5, 2000, 3:54 p.m.: 23 IR 1103; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269*)

### **355 IAC 4-6-11 Effective date (Repealed)**

Sec. 11. (*Repealed by State Chemist of the State of Indiana; filed Jan 5, 2000, 3:54 p.m.: 23 IR 1103*)

## **ARTICLE 5. STORAGE AND SECONDARY CONTAINMENT OF PESTICIDES**

- Rule 1. Definitions
- Rule 2. Storage of Liquid Pesticide
- Rule 3. Operational Area Containment of Liquid Pesticide at Storage Facilities
- Rule 4. Secondary Containment of Liquid Pesticide
- Rule 5. Storage of Dry Bulk Pesticide
- Rule 6. Preparations for Control and Recovery of Pesticide Discharges (*Repealed*)
- Rule 7. Record Keeping (*Repealed*)
- Rule 8. Storage Facility Registry

### **Rule 1. Definitions**

- 355 IAC 5-1-1 "Approved" defined
- 355 IAC 5-1-1.5 "Appurtenance" defined
- 355 IAC 5-1-2 "Bulk pesticide" defined (*Repealed*)
- 355 IAC 5-1-3 "Discharge" defined
- 355 IAC 5-1-4 "Dry pesticide" defined
- 355 IAC 5-1-5 "Elephant ring" defined
- 355 IAC 5-1-6 "Liquid pesticide" defined
- 355 IAC 5-1-7 "Minibulk pesticide" defined
- 355 IAC 5-1-7.5 "Mobile container" defined
- 355 IAC 5-1-8 "Operational area" defined
- 355 IAC 5-1-9 "Operational area containment" defined
- 355 IAC 5-1-10 "Primary containment" defined (*Repealed*)
- 355 IAC 5-1-11 "Secondary containment" defined

355 IAC 5-1-12 “State chemist” defined  
 355 IAC 5-1-13 “Storage container” defined  
 355 IAC 5-1-14 “Storage facility” defined  
 355 IAC 5-1-15 “Storage facility registry” defined

### **355 IAC 5-1-1 “Approved” defined**

**Authority:** IC 15-3-3.5-11

**Affected:** IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 1. As used in this article, “approved” means approval by the state chemist, except where otherwise stated. (*State Chemist of the State of Indiana; 355 IAC 5-1-1; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1400, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2212*)

### **355 IAC 5-1-1.5 “Appurtenance” defined**

**Authority:** IC 15-3-3.5-11

**Affected:** IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 1.5. As used in this article, “appurtenance” means any valve, pump, fitting, pipe, hose, metering device, or mechanical device that is connected to a storage container, or is used to transfer a material into or out of such container. (*State Chemist of the State of Indiana; 355 IAC 5-1-1.5; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2212*)

### **355 IAC 5-1-2 “Bulk pesticide” defined (*Repealed*)**

Sec. 2. (*Repealed by State Chemist of the State of Indiana; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2220*)

### **355 IAC 5-1-3 “Discharge” defined**

**Authority:** IC 15-3-3.5-11

**Affected:** IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 3. As used in this article, “discharge” means a release of a pesticide into either a secondary containment or operational containment area at a storage facility. (*State Chemist of the State of Indiana; 355 IAC 5-1-3; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1401, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2213*)

### **355 IAC 5-1-4 “Dry pesticide” defined**

**Authority:** IC 15-3-3.5-11

**Affected:** IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 4. As used in this article, “dry pesticide” means pesticide in an undivided quantity exceeding one hundred (100) pounds that is in solid form prior to any application or mixing for application and includes formulations, such as dusts, wettable powders, dry flowable powders, and

granules. (*State Chemist of the State of Indiana; 355 IAC 5-1-4; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1401, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2213*)

### **355 IAC 5-1-5 “Elephant ring” defined**

**Authority:** IC 15-3-3.5-11

**Affected:** IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 5. As used in this article, “elephant ring” means a storage container with open top serving as a secondary containment vessel into which a smaller storage container is placed. (*State Chemist of the State of Indiana; 355 IAC 5-1-5; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1401, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2213*)

### **355 IAC 5-1-6 “Liquid pesticide” defined**

**Authority:** IC 15-3-3.5-11

**Affected:** IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 6. As used in this article, “liquid pesticide” means pesticide in liquid form, including solutions, emulsions, suspensions, and slurries contained in an undivided quantity exceeding fifty-five (55) U.S. gallons. (*State Chemist of the State of Indiana; 355 IAC 5-1-6; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1401, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2213*)

### **355 IAC 5-1-7 “Minibulk pesticide” defined**

**Authority:** IC 15-3-3.5-11

**Affected:** IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 7. As used in this article, “minibulk pesticide” means an amount of liquid pesticide greater than fifty-five (55) gallons (two hundred eight (208) liters) but not exceeding four hundred (400) gallons (one thousand five hundred fourteen (1,514) liters), which is held in a single container designed for ready handling and transport, has been filled by the original pesticide manufacturer, and to which no substance has been added by any person. (*State Chemist of the State of Indiana; 355 IAC 5-1-7; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1401, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269*)

### **355 IAC 5-1-7.5 “Mobile container” defined**

**Authority:** IC 15-3-3.5-11

**Affected:** IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 7.5. As used in this article, “mobile container” means a storage container that is designed and used as:

- (1) a delivery vehicle;
- (2) application equipment; or
- (3) a minibulk pesticide container.

(*State Chemist of the State of Indiana; 355 IAC 5-1-7.5; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2213*)

### **355 IAC 5-1-8 “Operational area” defined**

**Authority:** IC 15-3-3.5-11

**Affected:** IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 8. As used in this article, “operational area” means an area or areas at a liquid pesticide storage facility where pesticides are transferred, loaded, unloaded, mixed, repackaged, or where pesticides are cleaned or washed from containers, or application, storage, or transportation equipment. (*State Chemist of the State of Indiana; 355 IAC 5-1-8; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1401, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269*)

### **355 IAC 5-1-9 “Operational area containment” defined**

**Authority:** IC 15-3-3.5-11

**Affected:** IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 9. As used in this article, “operational area containment” means any structure or system designed and constructed to effectively intercept and contain discharges, including container or equipment wash water and rainwater, and to prevent run-off or leaching from a storage facility. (*State Chemist of the State of Indiana; 355 IAC 5-1-9; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1401, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269*)

### **355 IAC 5-1-10 “Primary containment” defined (Repealed)**

Sec. 10. (*Repealed by State Chemist of the State of Indiana; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2220*)

### **355 IAC 5-1-11 “Secondary containment” defined**

**Authority:** IC 15-3-3.5-11

**Affected:** IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 11. As used in this article, “secondary containment” means any structure, such as a dike, used to contain pesticide discharges from storage containers and prevent run-off or leaching. (*State Chemist of the State of Indiana; 355 IAC 5-1-11; filed Mar 8, 1991, 2:45 p.m.:*

*14 IR 1402, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2213*)

### **355 IAC 5-1-12 “State chemist” defined**

**Authority:** IC 15-3-3.5-11

**Affected:** IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 12. As used in this article, “state chemist” means the Indiana state chemist or his appointed agent. (*State Chemist of the State of Indiana; 355 IAC 5-1-12; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1402, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269*)

### **355 IAC 5-1-13 “Storage container” defined**

**Authority:** IC 15-3-3.5-11

**Affected:** IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 13. (a) As used in this article, “storage container” means a container used for the storage of liquid or dry pesticide at a storage facility.

(b) The term does not include a mobile container storing liquid pesticide for less than thirty (30) days. In the case of minibulk pesticide containers, written and verifiable documentation as to the period of storage at the storage facility shall be required and made available to the state chemist upon request. (*State Chemist of the State of Indiana; 355 IAC 5-1-13; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1402, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2213*)

### **355 IAC 5-1-14 “Storage facility” defined**

**Authority:** IC 15-3-3.5-11

**Affected:** IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 14. As used in this article, “storage facility” means a location at which liquid or dry pesticide is held in storage. (*State Chemist of the State of Indiana; 355 IAC 5-1-14; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1402, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2214*)

### **355 IAC 5-1-15 “Storage facility registry” defined**

**Authority:** IC 15-3-3.5-11

**Affected:** IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 15. As used in this article, “storage facility registry” means the annual listing of all storage facilities in Indiana by the state chemist as derived from written notification from the storage facility. (*State Chemist of*

*the State of Indiana; 355 IAC 5-1-15; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1402, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2214)*

### **Rule 2. Storage of Liquid Pesticide**

355 IAC 5-2-1	Storage containers and appurtenances; basic requirements
355 IAC 5-2-2	Prohibition against underground storage
355 IAC 5-2-3	Abandoned containers
355 IAC 5-2-4	Prohibited materials
355 IAC 5-2-5	Anchoring storage containers
355 IAC 5-2-6	Vents
355 IAC 5-2-7	Security
355 IAC 5-2-8	Filling
355 IAC 5-2-9	Shutoff valves
355 IAC 5-2-10	Appurtenances
355 IAC 5-2-11	Liquid level gauging device
355 IAC 5-2-12	Maintenance
355 IAC 5-2-13	Compliance with effective date of rule ( <i>Repealed</i> )

### **355 IAC 5-2-1 Storage containers and appurtenances; basic requirements**

**Authority:** IC 15-3-3.5-11

**Affected:** IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 1. (a) Storage containers and appurtenances shall be constructed, installed, and maintained so as to prevent the discharge of liquid pesticide.

(b) Storage containers and appurtenances shall be constructed of materials which are resistant to corrosion, puncture, or cracking.

(c) Materials used in the construction or repair of storage containers and appurtenances may not be of a type which react chemically or electrolytically with stored liquid pesticide in a way which may weaken the storage container or appurtenances, create a risk of discharge, or adulterate the pesticide.

(d) Metals used for valves, fittings, and repairs on metal containers shall be compatible with the metals used in the construction of the storage container so that the combination of metals does not cause or increase corrosion which may weaken the storage container or its appurtenances or create a risk of discharge.

(e) Storage containers and appurtenances shall be designed to handle all operating stresses, taking into account static head, pressure build-up from pumps and compressors, and any other mechanical stresses to which the storage containers and appurtenances may be subject in the foreseeable course of operations. (*State Chemist of the State of Indiana; 355 IAC 5-2-1; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1402, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269*)

### **355 IAC 5-2-2 Prohibition against underground storage**

**Authority:** IC 15-3-3.5-11

**Affected:** IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 2. Liquid pesticide shall not be stored in an underground storage container. (*State Chemist of the State of Indiana; 355 IAC 5-2-2; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1403, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2214*)

### **355 IAC 5-2-3 Abandoned containers**

**Authority:** IC 15-3-3.5-11

**Affected:** IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 3. (a) Storage containers and other containers used at a storage facility to hold pesticide or pesticide rinse are considered abandoned if they have been out of service for more than six (6) months because of a weakness or leak or have been out of service for any reason for more than two (2) years.

(b) Abandoned underground containers, including abandoned underground catch basins, shall be thoroughly cleaned and removed from the ground or thoroughly cleaned and filled with an inert solid. All connections and vents shall be disconnected and sealed. A record of the catch basin size, location, and method of closing shall be maintained at the storage facility or as otherwise provided for in this article.

(c) Abandoned aboveground containers shall be thoroughly cleaned. All hatches on the containers shall be left open, and all valves or connections shall be severed and left open.

(d) Secondary containment is not considered abandoned merely because there have been no discharges into the secondary containment. (*State Chemist of the State of Indiana; 355 IAC 5-2-3; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1403, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2214*)

### **355 IAC 5-2-4 Prohibited materials**

**Authority:** IC 15-3-3.5-11

**Affected:** IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 4. (a) Storage containers and appurtenances shall not be made of polyvinyl chloride.

(b) A storage container shall not be made of ferrous metals, unless the container is made of stainless steel or other approved materials, or the container has a protective lining that inhibits corrosion and does not react chemically with the stored pesticide. (*State Chemist of*

*the State of Indiana; 355 IAC 5-2-4; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1403, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2214)*

### **355 IAC 5-2-5 Anchoring storage containers**

**Authority:** IC 15-3-3.5-11

**Affected:** IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 5. (a) Storage containers shall be anchored, as necessary, to prevent flotation or instability which might occur as a result of liquid accumulations within secondary containment.

(b) Storage containers shall be considered anchored if, in addition to other approved means, the containers:

- (1) are placed on a raised area or platform of such height as to prevent flotation or instability in the event of liquid accumulations; or
- (2) store product with sufficient volume to rise to at least the height of the secondary containment walls.

*(State Chemist of the State of Indiana; 355 IAC 5-2-5; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1403, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2215)*

### **355 IAC 5-2-6 Vents**

**Authority:** IC 15-3-3.5-11

**Affected:** IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 6. (a) Each storage container shall be equipped with a vent with hood or inverted opening.

(b) Conservation vents shall be used on containers storing products where loss of vapor affects product quality or where the vapor is harmful to plants, animals, or humans.

(c) Conservation vents shall open and close within the designed pressure limits of the storage container. *(State Chemist of the State of Indiana; 355 IAC 5-2-6; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1403, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2215)*

### **355 IAC 5-2-7 Security**

**Authority:** IC 15-3-3.5-11

**Affected:** IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 7. (a) Storage containers and appurtenances shall be secured to provide reasonable protection from wild-life, vandalism, and unauthorized access. Such security shall be provided by fencing, lighting, or other approved means.

(b) Valves on storage containers shall be locked or otherwise secured, except when persons responsible for facility security are present at the facility.

(c) Valves on mobile containers parked overnight at a storage facility shall be locked or secured except when persons responsible for facility security are present at the facility.

(d) Valves on empty containers need not be secured. *(State Chemist of the State of Indiana; 355 IAC 5-2-7; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1403, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2215)*

### **355 IAC 5-2-8 Filling**

**Authority:** IC 15-3-3.5-11

**Affected:** IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 8. Storage containers shall not be filled to more than ninety-five percent (95%) of capacity unless the storage container construction or location provides constant temperature control, or is otherwise designed to be filled to a capacity of greater than ninety-five percent (95%). *(State Chemist of the State of Indiana; 355 IAC 5-2-8; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1404, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2215)*

### **355 IAC 5-2-9 Shutoff valves**

**Authority:** IC 15-3-3.5-11

**Affected:** IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 9. (a) Storage container connections, except for safety relief connections, shall be equipped with a shutoff valve located on the storage container or at a distance from the storage container dictated by standard engineering practice.

(b) Except for a storage container of minibulk pesticide, all wetted parts inside shutoff valves and connections from the storage container to the shutoff valve shall be made of stainless steel or other approved material. *(State Chemist of the State of Indiana; 355 IAC 5-2-9; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1404, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2215)*

### **355 IAC 5-2-10 Appurtenances**

**Authority:** IC 15-3-3.5-11

**Affected:** IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 10. Appurtenances shall be adequately supported to prevent sagging and possible breakage because of

gravity and other forces which may be encountered in the ordinary course of operations. (*State Chemist of the State of Indiana*; 355 IAC 5-2-10; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1404, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2216)

### 355 IAC 5-2-11 Liquid level gauging device

Authority: IC 15-3-3.5-11

Affected: IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 11. (a) Storage containers shall be equipped with a liquid level gauging device or other means by which the level of liquid in the storage container can be readily and safely determined.

(b) External sight gauges are prohibited. (*State Chemist of the State of Indiana*; 355 IAC 5-2-11; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1404, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2216)

### 355 IAC 5-2-12 Maintenance

Authority: IC 15-3-3.5-11

Affected: IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 12. Storage containers and appurtenances shall be maintained to minimize the risk of a discharge. (*State Chemist of the State of Indiana*; 355 IAC 5-2-12; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1404, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2216)

### 355 IAC 5-2-13 Compliance with effective date of rule (*Repealed*)

Sec. 13. (*Repealed by State Chemist of the State of Indiana*; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2220)

## Rule 3. Operational Area Containment of Liquid Pesticide at Storage Facilities

355 IAC 5-3-1 Operational area containment

355 IAC 5-3-2 Compliance with effective date of rule (*Repealed*)

### 355 IAC 5-3-1 Operational area containment

Authority: IC 15-3-3.5-11

Affected: IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 1. (a) Operational areas at a storage facility shall have containment that is curbed and paved with reinforced concrete or other approved material that provides

an impervious surface. Operational area activities shall be carried out within this containment.

(b) The operational area containment shall be constructed and reinforced to support the foreseeable maximum gross load of all product, equipment, and motor vehicles utilizing the area. The containment shall have a minimum width of ten (10) feet, a minimum length of twenty (20) feet, and a minimum capacity of seven hundred fifty (750) gallons. Points of loading and unloading shall be positioned over the containment.

(c) Wherever sufficient capacity required in 355 IAC 5-4-1(c) and provisions of this rule are complied with, the secondary containment described in 355 IAC 5-4 may be designed for and jointly used in lieu of a separate operational area containment.

(d) The operational area containment shall form or drain into a watertight catch basin. If the operational area containment drains to a sump, the catch basin may include the sump and an aboveground container, provided a pump is installed which automatically transfers the contents of the sump into an aboveground container. Such containers used for the temporary storage of liquids collected from the operational area containment shall be located within secondary containment.

(e) All liquids shall be promptly removed from the operational area containment for use in the blending process or for proper disposal in accordance with all applicable rules. The capacity required in subsection (b) shall be available at all times.

(f) Storage containers and appurtenances shall be protected against reasonably foreseeable risks of damage by vehicles operating in the area.

(g) This section does not apply to the unloading of mobile containers at the pesticide application site.

(h) Operational area containment shall be maintained as necessary to assure compliance with this rule.

(i) Alternative means, including portable operational area containment systems, shall be permitted to serve as operational area containment systems if approved. (*State Chemist of the State of Indiana*; 355 IAC 5-3-1; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1405, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2216)

### 355 IAC 5-3-2 Compliance with effective date of rule (*Repealed*)

Sec. 2. (*Repealed by State Chemist of the State of Indiana*; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2220)

## Rule 4. Secondary Containment of Liquid Pesticide

355 IAC 5-4-1	General requirements
355 IAC 5-4-2	Walls
355 IAC 5-4-3	Base liners
355 IAC 5-4-4	Drainage from secondary containment
355 IAC 5-4-5	Drainage from contained areas within dikes; concrete lined area ( <i>Repealed</i> )
355 IAC 5-4-6	Drainage from contained areas within dikes; alternative to a recessed catch drain in concrete lined containment areas ( <i>Repealed</i> )
355 IAC 5-4-7	Alternative to secondary containment for storage containers of 3,000 gallons or less
355 IAC 5-4-8	Maintenance
355 IAC 5-4-9	Compliance with effective date of rule ( <i>Repealed</i> )

### 355 IAC 5-4-1 General requirements

**Authority:** IC 15-3-3.5-11

**Affected:** IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 1. (a) Liquid pesticide storage containers shall be located within secondary containment constructed with a base, perimeter wall, and sloped floor. Exception for a sloped floor may be granted by the state chemist.

(b) The containment area shall be separate from a secondary containment area for other materials and used only for containment of liquid pesticide storage containers or other pesticide related equipment. Adjoining secondary containment areas may share common walls.

(c) Secondary containment not protected from rainfall shall at all times have a minimum capacity of one hundred percent (100%) of the volume of the largest storage container within the contained area plus the volume displaced by all the other tanks, equipment, and appurtenances in the area up to the safe design level of the containment structure plus a freeboard of six (6) inches.

(d) Secondary containment protected from rainfall is not required to have the freeboard noted in subsection (c), but shall comply with all other requirements therein.

(e) Secondary containment constructed prior to enactment of this rule and that has a capacity of a minimum of one hundred ten percent (110%) of the volume of the largest storage container within the contained area plus the volume displaced by all the other tanks in the area up to the safe design level of the containment structure shall be deemed to be in compliance with this rule. Any such storage facility upon alteration of the secondary containment area or increases in storage container volume shall be brought into full compliance within ninety (90) days of alteration or increase.

(f) Tile drainage shall not be permitted within or under secondary containment. (*State Chemist of the State of Indiana; 355 IAC 5-4-1; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1405, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2217*)

### 355 IAC 5-4-2 Walls

**Authority:** IC 15-3-3.5-11

**Affected:** IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 2. (a) The walls of secondary containment shall be constructed of steel, poured reinforced concrete, precast concrete modules, or solid masonry and be designed to withstand a full hydrostatic head of any discharged liquid and weight load of material used in construction.

(b) Cracks and seams shall be sealed to prevent leakage.

(c) Walls shall not exceed six (6) feet in height above interior grade unless provisions are made for normal access and necessary emergency access to storage containers, valves, and other equipment and for safe exit from the secondary containment.

(d) Walls constructed of concrete or solid masonry shall rest upon a floating base of concrete prepared as in section 3(b) of this rule or upon suitable concrete footings which extend below the average frost depth. Joints between walls and the base shall be watertight. (*State Chemist of the State of Indiana; 355 IAC 5-4-2; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1406; errata filed May 10, 1991, 2:30 p.m.: 14 IR 1730, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2217*)

### 355 IAC 5-4-3 Base liners

**Authority:** IC 15-3-3.5-11

**Affected:** IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 3. (a) The base of secondary containment shall be lined with concrete, steel, or other approved liners.

(b) Concrete liners shall be designed according to good engineering practices to withstand any foreseeable loading conditions, including a full hydrostatic head of discharged fluid and static loads of storage containers, including appurtenances, equipment, and contents. Cracks and seams shall be sealed to prevent leakage.

(c) Steel liners and installation plans shall be approved before use.

(d) Synthetic liners and installation plans shall be approved before use.

(e) Synthetic liners shall have a minimum thickness of thirty (30) mils (eight-tenths (0.8) millimeter) and be chemically compatible with the materials being stored within the containment.

(f) Synthetic liners shall be installed under the supervision of a qualified representative of the manufacturer, and all field constructed seams shall be tested and repaired, if necessary, in accordance with the manufac-

turer's recommendations. (*State Chemist of the State of Indiana; 355 IAC 5-4-3; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1406, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2218*)

#### **355 IAC 5-4-4 Drainage from secondary containment**

**Authority:** IC 15-3-3.5-11

**Affected:** IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 4. Secondary containment shall not have a relief outlet or valve. The base shall slope to a collecting spot where liquid shall be removed by a manually activated pump over the wall for use in the blending process or for proper disposal in accordance with all applicable regulations. (*State Chemist of the State of Indiana; 355 IAC 5-4-4; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1407, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2218*)

#### **355 IAC 5-4-5 Drainage from contained areas within dikes; concrete lined area (Repealed)**

Sec. 5. (*Repealed by State Chemist of the State of Indiana; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2220*)

#### **355 IAC 5-4-6 Drainage from contained areas within dikes; alternative to a recessed catch drain in concrete lined containment areas (Repealed)**

Sec. 6. (*Repealed by State Chemist of the State of Indiana; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2220*)

#### **355 IAC 5-4-7 Alternative to secondary containment for storage containers of 3,000 gallons or less**

**Authority:** IC 15-3-3.5-11

**Affected:** IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 7. (a) Individual storage containers not exceeding three thousand (3,000) gallons may be contained within an elephant ring in lieu of secondary containment.

(b) Both the storage container and the elephant ring shall be fabricated of materials compatible with each other and with the pesticide being stored. The storage container and the elephant ring shall be constructed of similar metals. Elephant rings shall not be constructed of plastic.

(c) The height of the elephant ring wall shall not exceed four (4) feet. The minimum capacity of the elephant ring shall be one hundred percent (100%) of the volume of the storage container plus the volume displaced by all equipment, and appurtenances in the secondary containment vessel up to the safe storage level of the elephant ring, plus a freeboard of six (6) inches. An elephant ring protected from rainfall is not required to have the freeboard of six (6) inches.

(d) The elephant ring shall be free of leaks and structural defects. The base shall be protected from corrosion, both from inside and outside, and shall be underlain by a concrete pad or by eight (8) inches of compacted gravel beneath four (4) inches of compacted sand or as recommended by the manufacturer of the elephant ring and approved by the state chemist.

(e) The elephant ring shall not have a relief outlet or valve. No appurtenances shall extend through the wall of the elephant ring. Pumps located within the elephant ring shall be placed on an elevated platform.

(f) Liquid shall be removed from the elephant ring by means of a manually activated pump for use in the blending process or disposal in accordance with all applicable regulations.

(g) Elephant rings shall be maintained as necessary to assure compliance with this rule. (*State Chemist of the State of Indiana; 355 IAC 5-4-7; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1407, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2218*)

#### **355 IAC 5-4-8 Maintenance**

**Authority:** IC 15-3-3.5-11

**Affected:** IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 8. (a) Secondary containment shall be maintained as necessary to assure compliance with this rule.

(b) Secondary containment shall be maintained free of debris and foreign matter. (*State Chemist of the State of Indiana; 355 IAC 5-4-8; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1408, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2219*)

#### **355 IAC 5-4-9 Compliance with effective date of rule (Repealed)**

Sec. 9. (*Repealed by State Chemist of the State of Indiana; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2220*)

### **Rule 5. Storage of Dry Bulk Pesticide**

355 IAC 5-5-1 Storage requirements

355 IAC 5-5-2 Compliance with effective date of rule  
(*Repealed*)

### 355 IAC 5-5-1 Storage requirements

**Authority:** IC 15-3-3.5-11

**Affected:** IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 1. (a) Dry pesticide shall be kept in storage containers effectively designed and constructed to hold dry pesticide. Storage containers shall be constructed of materials that are compatible with the pesticide being stored resistant to corrosion, puncture, or cracking, and shall be maintained in a good state of repair. Storage containers shall be placed on pallets or on a raised concrete platform which is drained to prevent the accumulation of water in or under the pesticide.

(b) Except during loading or unloading, stored dry pesticide shall be covered by a roof or tarpaulin that will keep precipitation off the pesticide.

(c) Storage facilities shall be secured to provide reasonable protection from wildlife, vandalism, and unauthorized access. (*State Chemist of the State of Indiana; 355 IAC 5-5-1; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1408, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2219*)

### 355 IAC 5-5-2 Compliance with effective date of rule (*Repealed*)

Sec. 2. (*Repealed by State Chemist of the State of Indiana; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2220*)

### Rule 6. Preparations for Control and Recovery of Pesticide Discharges (*Repealed*)

(*Repealed by State Chemist of the State of Indiana; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2220*)

### Rule 7. Record Keeping (*Repealed*)

(*Repealed by State Chemist of the State of Indiana; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2220*)

### Rule 8. Storage Facility Registry

355 IAC 5-8-1 Facility registry

355 IAC 5-8-2 Compliance with effective date of rule  
(*Repealed*)

### 355 IAC 5-8-1 Facility registry

**Authority:** IC 15-3-3.5-11

**Affected:** IC 15-3-3.5-33; IC 15-3-3.5-34

Sec. 1. Storage facilities shall notify the state chemist each year of the facilities' location and status. The notice shall include the facilities':

- (1) mailing address;
- (2) owner or manager name;
- (3) rated or calculated capacity off all storage containers; and
- (4) physical location of storage containers.

(*State Chemist of the State of Indiana; 355 IAC 5-8-1; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1410, eff sixty (60) days after filing with secretary of state; readopted filed Nov 21, 2001, 10:17 a.m.: 25 IR 1269; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2219*)

### 355 IAC 5-8-2 Compliance with effective date of rule (*Repealed*)

Sec. 2. (*Repealed by State Chemist of the State of Indiana; filed Feb 20, 2002, 9:38 a.m.: 25 IR 2220*)

## ARTICLE 6. ANIMAL FOODS

Rule 1. General Provisions

Rule 2. Pet Food

### Rule 1. General Provisions

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### 355 IAC 6-1-1 Definitions and terms

**Authority:** IC 15-5-13-14

**Affected:** IC 15-5-13-1; IC 15-5-13-9

Sec. 1. (a) The names and definitions for commercial feeds shall be the official definitions of feed ingredients adopted by the Association of American Feed Control Officials (AAFCO), except as the director designates otherwise in specific cases.

(b) The terms used in reference to commercial feeds shall be the official feed terms adopted by the AAFCO, except as the director designates otherwise in specific cases.

(c) The following commodities, when unground and when not mixed or intermixed with other materials, are hereby declared exempt from the definition of commercial feeds under IC 15-5-13-1:

- (1) Raw meat.
- (2) Hay.
- (3) Straw.
- (4) Stover.
- (5) Silages.
- (6) Cobs.
- (7) Husks.
- (8) Hulls.

Provided that these commodities are not adulterated within the meaning of IC 15-5-13-9.

(d) The individual chemical compounds and substances of loose salt (sodium chloride) are hereby declared exempt from the definition of commercial feed under IC 15-5-13-1.

(e) Unmanipulated high moisture (greater than ninety percent (90%) moisture) human food processing byproducts are hereby declared exempt from the definition of commercial feed under IC 15-5-13-1 provided they are not adulterated within the meaning of IC 15-5-13-9.

(f) "Custom-mixed feed" includes feed to which the manufacturer retains title and which is fed to animals to which the manufacturer retains title. (*State Chemist of the State of Indiana; 355 IAC 6-1-1; filed Apr 4, 2002, 9:26 a.m.: 25 IR 2444*)

### 355 IAC 6-1-2 Label format

**Authority:** IC 15-5-13-14

**Affected:** IC 15-5-13

Sec. 2. (a) Commercial feed, other than custom-mixed feed, shall be labeled with the information prescribed in this rule on the principal display panel of the product and in the following format:

- (1) Product name and brand name, if any, as stipulated in section 3(a)(1) of this rule.
- (2) If a drug is used, label as stipulated in section 3(a)(2) of this rule.
- (3) Purpose statement as stipulated in section 3(a)(3) of this rule.
- (4) Guaranteed analysis as stipulated in section 3(a)(4) of this rule.
- (5) Feed ingredients as stipulated in section 3(a)(5) of this rule.
- (6) Directions for use and precautionary statements as stipulated in section 3(a)(6) of this rule.
- (7) Name and principal mailing address of the manufacturer or person responsible for distributing the feed as stipulated in section 3(a)(7) of this rule.
- (8) Quantity statement.

(b) The following requirements apply to labeling:

- (1) The information required in subsection (a)(1) through (a)(5), (a)(7), and (a)(8) must appear in its entirety on one (1) side of the label or on one (1) side

of the container.

(2) The information required by subsection (a)(6) shall be displayed in a prominent place on the label or container but not necessarily on the same side as the information in subdivision (1). When the information required by subsection (a)(6) is placed on a different side of the label or container, it shall be referenced on the front side with a statement, such as "See back of label for directions for use.". None of the information required by this section shall be subordinated or obscured by other statements or designs.

(c) Custom mixed feed shall be accompanied with the information prescribed in this rule using labels, invoice, delivery ticket, or another distribution document bearing the following information:

- (1) The name and address of the manufacturer.
- (2) The name and address of the purchaser.
- (3) The date of sale or delivery.
- (4) The custom mixed feed name and brand name if any.
- (5) The product name and net quantity of each commercial feed and each other ingredient used in the mixture.
- (6) The direction for use and precautionary statements as required by sections 7 and 8 of this rule.
- (7) If a drug containing product is used, the:
  - (A) purpose of the medication (claim statement); and
  - (B) established name of each active drug ingredient and the level of each drug used in the final mixture expressed in accordance with section 4(d) of this rule.

(*State Chemist of the State of Indiana; 355 IAC 6-1-2; filed Apr 4, 2002, 9:26 a.m.: 25 IR 2444*)

### 355 IAC 6-1-3 Label information

**Authority:** IC 15-5-13-14

**Affected:** IC 15-5-13-6; IC 15-5-13-8

Sec. 3. (a) Commercial feed, other than custom-mixed feed, shall be labeled with the information prescribed as follows:

- (1) Product name and brand name, if any, as follows:
  - (A) The brand or product name must be appropriate for the intended use of the feed and must not be misleading. If the name indicates the feed is made for a specific use, the character of the feed must conform therewith. A commercial feed for a particular animal class must be suitable for that purpose.
  - (B) Commercial, registered brand or trade names are not permitted in guarantees or ingredient listings and only in the product name of feeds produced by or for the firm holding the rights to such a name.
  - (C) The name of a commercial feed shall not be

derived from one (1) or more ingredients of a mixture to the exclusion of other ingredients and shall not be one representing any components of a mixture unless all components are included in the name, provided, that if any ingredient or combination of ingredients is intended to impart a distinctive characteristic to the product which is of significance to the purchaser, the name of that ingredient or combination of ingredients may be used as a part of the brand name or product name if the ingredient or combination of ingredients is quantitatively guaranteed in the guaranteed analysis, and the brand or product name is not otherwise false or misleading.

(D) The word "protein" shall not be permitted in the product name of a feed that contains added nonprotein nitrogen.

(E) When the name carries a percentage value, it shall be understood to signify protein and/or equivalent protein from nonprotein nitrogen content only, even though it may not explicitly modify the percentage with the word "protein", provided that other percentage values may be permitted if they are followed by the proper description and conform to good labeling practices. Digital numbers shall not be used in a product name in such a manner as to be misleading or confusing to the customer.

(F) Single ingredient feeds shall have a product name in accordance with the designated definition of feed ingredients as recognized by the Association of American Feed Control Officials unless the director designates otherwise.

(G) The word "vitamin", or a contraction thereof, or any word suggesting vitamin can be used only in the name of a feed which is represented to be a vitamin supplement, and which is labeled with the minimum content of each vitamin declared, as specified in section 4(c) of this rule.

(H) The term "mineralized" shall not be used in the name of a feed except for "TRACE MINERALIZED SALT". When so used, the product must contain significant amounts of trace minerals which are recognized as essential for animal nutrition.

(I) The term "meat" and "meat byproducts" shall be qualified to designate the animal from which the meat and meat byproducts is derived unless the meat and meat byproducts are made from cattle, swine, sheep, and goats.

(2) If a drug is used, the following requirements apply:

(A) The word "medicated" shall appear directly following and below the product name in type size, no smaller than half the type size of the product name.

(B) Purpose statement as required in subdivision (3).

(C) The purpose of medication (claim statement).

(D) An active ingredient statement listing the active drug ingredients by their established name and the amounts in accordance with section 4(d) of this rule.

(3) Requirements for purpose statement are as follows:

(A) The statement of purpose shall contain the specific species and animal class or classes for which the feed is intended as defined in subdivision (4).

(B) The manufacturer shall have flexibility in describing in more specific and common language the defined animal class, species, and purpose while being consistent with the category of animal class defined in subdivision (4), which may include, but is not limited to, weight range, sex, or age of the animal for which the feed is manufactured.

(C) The purpose statement may be excluded from the label if the product name includes a description of the species and animal class or classes for which the product is intended.

(D) The purpose statement of a premix for the manufacture of feed may exclude the animal class and species and state "For Further Manufacture of Feed" if the nutrients contained in the premix are guaranteed and sufficient for formulation into various animal species feeds and premix specifications are provided by the end user of the premix. This section is applicable to commercial feeds regulated under subdivision (4)(J)(ii)(JJ).

(E) The purpose statement of a single purpose ingredient blend, such as a blend of animal protein products, milk products, fat products, roughage products, or molasses products may exclude the animal class and species and state "For Further Manufacture of Feed" if the label guarantees of the nutrients contained in the single purpose nutrient blend are sufficient to provide for formulation into various animal species feeds. This section is applicable to commercial feeds regulated under subdivision (4)(J)(ii)(JJ).

(F) The purpose statement of a product shall include a statement of enzyme functionality if enzymatic activity is represented in any manner.

(4) Guarantees for crude protein, equivalent crude protein from nonprotein nitrogen, amino acids, crude fat, crude fiber, acid detergent fiber, calcium, phosphorus, salt, and sodium shall be the sequence of nutritional guarantees when such guarantee is stated. Other required and voluntary guarantees should follow in a general format such that the units of measure used to express guarantees (percentage, parts per million, International Units, etc.) are listed in a sequence that provides a consistent grouping of the units of measure as follows:

(A) Required guarantees for swine formula feeds are as follows:

(i) Animal classes as follows:

- (AA) Prestarter, two (2) to eleven (11) pounds.
- (BB) Starter, eleven (11) to forty-four (44) pounds.
- (CC) Grower, forty-four (44) to one hundred ten (110) pounds.
- (DD) Finisher, one hundred ten (110) to two hundred forty-two (242) pounds (market).
- (EE) Gilts, sows, and adult boars.
- (FF) Lactating gilts and sows.

(ii) Guaranteed analysis for swine complete feeds and supplements (all animal classes) as follows:

- (AA) Minimum percentage of crude protein.
- (BB) Minimum percentage of lysine.
- (CC) Minimum percentage of crude fat.
- (DD) Maximum percentage of crude fiber.
- (EE) Minimum and maximum percentage of calcium.
- (FF) Minimum percentage of phosphorus.
- (GG) Minimum and maximum percentage of salt (if added).
- (HH) Minimum and maximum percentage of total sodium shall be guaranteed only when total sodium exceeds that furnished by the maximum salt guarantee.
- (II) Minimum selenium in parts per million.
- (JJ) Minimum zinc in parts per million.

(B) Required guarantees for formula poultry feeds (broilers, layers, and turkeys) as follows:

(i) Animal classes as follows:

- (AA) Layer, chickens that are grown to produce eggs for food, for example, table eggs:
  - (aa) starting/growing, from day of hatch to approximately ten (10) weeks of age;
  - (bb) finisher, from approximately ten (10) weeks of age to the time first egg is produced (approximately twenty (20) weeks of age);
  - (cc) laying, from the time the first egg is laid throughout the time of egg production; and
  - (dd) breeders, chickens that produce fertile eggs for hatch replacement layers to produce eggs for food, table eggs, from the time the first egg is laid throughout their productive cycle.

(BB) Broilers, chickens that are grown for human food:

- (aa) starting/growing, from the day of hatch to approximately five (5) weeks of age;
- (bb) finisher, from approximately five (5) weeks of age to market, (forty-two (42) to fifty-two (52) days); and

(cc) breeders, hybrid strains of chickens whose offspring are grown for human food (broilers) any age and either sex.

(CC) Broilers, breeders, chickens whose offspring are grown for human food (broilers):

- (aa) starting/growing, from the day of hatch until approximately ten (10) weeks of age;
- (bb) finishing, from approximately ten (10) weeks of age to the time the first egg is produced, approximately twenty (20) weeks of age; and
- (cc) laying, fertile egg producing chickens (broilers/roasters) from the day of the first egg throughout the time fertile eggs are produced.

(DD) Turkeys:

- (aa) starting/growing, turkeys that are grown for human food from the day of the hatch to approximately thirteen (13) weeks of age (females) and sixteen (16) weeks of age (males);
- (bb) finisher, turkeys that are grown for human food, females from approximately thirteen (13) weeks of age to approximately seventeen (17) weeks of age; males from sixteen (16) weeks of age to twenty (20) weeks of age (or desired market weight);
- (cc) laying, female turkeys that are producing eggs; from the time the first egg is produced, throughout the time they are producing eggs; and
- (dd) breeder, turkeys that are grown to produce fertile eggs, from the day of hatch to the time the first eggs produced (approximately thirty (30) weeks of age), both sexes.

(ii) Guaranteed analysis for poultry complete feeds and supplements (all animal classes):

- (AA) minimum percentage of crude protein;
- (BB) minimum percentage of lysine;
- (CC) minimum percentage of methionine;
- (DD) minimum percentage of crude fat;
- (EE) maximum percentage of crude fiber;
- (FF) minimum and maximum percentage of calcium;
- (GG) minimum percentage of phosphorus;
- (HH) minimum and maximum percentage of salt (if added); and
- (II) minimum and maximum percentage of total sodium shall be guaranteed only when total sodium exceeds that furnished by the maximum salt guarantee.

(C) Required guaranteed for beef cattle formula feeds as follows:

(i) Animal classes as follows:

- (AA) Calves (birth to weaning).
- (BB) Cattle on pasture may be specific as to production stage, for example:
  - (aa) shocker;
  - (bb) feeder;
  - (cc) replacement heifers;
  - (dd) brood cows; or
  - (ee) bulls.
- (CC) Feedlot cattle.
- (ii) Guaranteed analysis for beef complete feeds and supplements (all animal classes) as follows:
  - (AA) Minimum percentage of crude protein.
  - (BB) Maximum percentage of equivalent crude protein from nonprotein nitrogen when added.
  - (CC) Minimum percentage of crude fat.
  - (DD) Maximum percentage of crude fiber.
  - (EE) Minimum and maximum percentage of calcium.
  - (FF) Minimum percentage of phosphorus.
  - (GG) Minimum and maximum percentage of salt (if added).
  - (HH) Minimum and maximum percentage of total sodium shall be guaranteed only when total sodium exceeds that furnished by the maximum salt guarantee.
  - (II) Minimum percentage of potassium.
  - (JJ) Minimum vitamin A, other than precursors of vitamin A, in International Units per pound (if added).
- (iii) Guaranteed analysis for beef mineral feeds (if added) as follows:
  - (AA) Minimum and maximum percentage calcium.
  - (BB) Minimum percentage of phosphorus.
  - (CC) Minimum and maximum percentage of salt.
  - (DD) Minimum and maximum percentage of total sodium shall be guaranteed only when total sodium exceeds that furnished by the maximum salt guarantee.
  - (EE) Minimum percentage of magnesium.
  - (FF) Minimum percentage of potassium.
  - (GG) Minimum copper in parts per million.
  - (HH) Minimum selenium in parts per million.
  - (II) Minimum zinc in parts per million.
  - (JJ) Minimum vitamin A, other than precursors of vitamin A, in International Units per pound.
- (D) Required guarantees for dairy formula feeds as follows:
  - (i) Animal classes as follows:
    - (AA) Veal milk replacer, milk replacer to be fed for veal production.
    - (BB) Herd milk replacer, milk replacer to be fed for herd replacement calves.
    - (CC) Starter, approximately three (3) days to three (3) months.
    - (DD) Growing heifers, bulls, and dairy beef as follows:
      - (aa) Grower 1, three (3) months to twelve (12) months of age.
      - (bb) Grower 2, more than twelve (12) months of age.
    - (EE) Lactating dairy cattle.
    - (FF) Nonlactating dairy cattle.
  - (ii) Guaranteed analysis for veal and herd replacement milk replacer as follows:
    - (AA) Minimum percentage crude protein.
    - (BB) Minimum percentage crude fat.
    - (CC) Maximum percentage of crude fiber.
    - (DD) Minimum and maximum percentage calcium.
    - (EE) Minimum percentage of phosphorus.
    - (FF) Minimum vitamin A, other than precursors of vitamin A, in International Units per pound (if added).
  - (iii) Guaranteed analysis for dairy cattle complete feeds and supplements as follows:
    - (AA) Minimum percentage of crude protein.
    - (BB) Maximum percentage of equivalent crude protein from nonprotein nitrogen when added.
    - (CC) Minimum percentage of crude fat.
    - (DD) Maximum percentage of crude fiber.
    - (EE) Maximum percentage of acid detergent fiber.
    - (FF) Minimum and maximum percentage of calcium.
    - (GG) Minimum percentage of phosphorus.
    - (HH) Minimum selenium in parts per million.
    - (II) Minimum vitamin A, other than precursors of vitamin A, in International Units per pound (if added).
  - (iv) Required guaranteed analysis for dairy mixing and pasture mineral as follows:
    - (AA) Minimum and maximum percentage of calcium.
    - (BB) Minimum percentage of phosphorus.
    - (CC) Minimum and maximum percentage of salt.
    - (DD) Minimum and maximum percentage of total sodium shall be guaranteed only when total sodium exceeds that furnished by the maximum salt guarantee.
    - (EE) Minimum percentage of magnesium.
    - (FF) Minimum percentage of potassium.
    - (GG) Minimum selenium in parts per million.
    - (HH) Minimum vitamin A, other than the pre

- cursors of vitamin A, in International Units per pound.
- (E) Required guarantees for equine formula feeds as follows:
- (i) Animal classes as follows:
    - (AA) Foal.
    - (BB) Mare.
    - (CC) Breeding.
    - (DD) Maintenance.
  - (ii) Guaranteed analysis for equine complete feeds and supplements (all animal classes) as follows:
    - (AA) Minimum percentage of crude protein.
    - (BB) Minimum percentage of crude fat.
    - (CC) Maximum percentage of crude fiber.
    - (DD) Minimum and maximum percentage of calcium.
    - (EE) Minimum percentage of phosphorus.
    - (FF) Minimum copper in parts per million.
    - (GG) Minimum selenium in parts per million.
    - (HH) Minimum zinc in parts per million.
    - (II) Minimum vitamin A, other than the precursors of vitamin A, in International Units per pound (if added).
  - (iii) Guaranteed analysis for equine mineral feeds (all animal classes) as follows:
    - (AA) Minimum and maximum percentage of calcium.
    - (BB) Minimum percentage of phosphorus.
    - (CC) Minimum and maximum percentage of salt (if added).
    - (DD) Minimum and maximum percentage of sodium shall be guaranteed only when the total sodium exceeds that furnished by the maximum salt guarantee.
    - (EE) Minimum copper in parts per million.
    - (FF) Minimum selenium in parts per million.
    - (GG) Minimum zinc in parts per million.
    - (HH) Minimum vitamin A, other than precursors of vitamin A, in International Units per pound (if added).
- (F) Required guaranteed for goat and sheep formula feeds as follows:
- (i) Animal classes as follows:
    - (AA) Starter.
    - (BB) Grower.
    - (CC) Finisher.
    - (DD) Breeder.
    - (EE) Lactating.
  - (ii) Guaranteed analysis for goat and sheep complete feeds and supplements (all animal classes) as follows:
    - (AA) Minimum percentage of crude protein.
    - (BB) Maximum percentage of equivalent crude protein from nonprotein nitrogen when added.
    - (CC) Minimum percentage of crude fat.
    - (DD) Maximum percentage of crude fiber.
    - (EE) Minimum and maximum percentage of calcium.
    - (FF) Minimum percentage of phosphorus.
    - (GG) Minimum and maximum percentage of salt (if added).
    - (HH) Minimum and maximum percentage of total sodium shall be guaranteed only when total sodium exceeds that furnished by the maximum salt guarantee.
    - (II) Minimum and maximum copper in parts per million (if added, or if total copper exceeds twenty (20) parts per million).
    - (JJ) Minimum selenium in parts per million.
    - (KK) Minimum vitamin A, other than precursors of vitamin A, in International Units per pound (if added).
- (G) Required guarantees for duck and geese formula feeds as follows:
- (i) Animal classes as follows:
    - (AA) Ducks as follows:
      - (aa) Starter, zero (0) to three (3) weeks of age.
      - (bb) Grower, three (3) to six (6) weeks of age.
      - (cc) Finisher, six (6) weeks to market.
      - (dd) Breeder developer, eight (8) to nineteen (19) weeks of age.
      - (ee) Breeder, twenty-two (22) weeks to end of lay.
    - (BB) Geese as follows:
      - (aa) Starter, zero (0) to four (4) weeks of age.
      - (bb) Grower, four (4) to eight (8) weeks of age.
      - (cc) Finisher, eight (8) weeks to market.
      - (dd) Breeder developer, ten (10) to twenty-two (22) weeks of age.
      - (ee) Breeder, twenty-two (22) weeks to end of lay.
  - (ii) Guaranteed analysis for duck and geese complete feeds and supplements (for all animal classes) as follows:
    - (AA) Minimum percentage of crude protein.
    - (BB) Minimum percentage of crude fat.
    - (CC) Maximum percentage of crude fiber.
    - (DD) Minimum and maximum percentage of calcium.
    - (EE) Minimum percentage of phosphorus.
    - (FF) Minimum and maximum percentage of salt (if added).
    - (GG) Minimum and maximum percentage of total sodium shall be guaranteed only when total sodium exceeds that furnished by the maximum

- salt guarantee.
- (H) Required guarantees for fish complete feeds and supplements as follows:
- (i) Animal species shall be declared in lieu of animal class as follows:
    - (AA) Trout.
    - (BB) Catfish.
    - (CC) Species other than trout or catfish.
  - (ii) Guaranteed analysis for all fish complete feeds and supplements as follows:
    - (AA) Minimum percentage of crude protein.
    - (BB) Minimum percentage of crude fat.
    - (CC) Maximum percentage of crude fiber.
    - (DD) Minimum percentage of phosphorus.
- (I) Required guarantees for rabbit complete feeds and supplements as follows:
- (i) Animal classes as follows:
    - (AA) Grower, four (4) to twelve (12) weeks of age.
    - (BB) Breeder, twelve (12) weeks of age and over.
  - (ii) Guaranteed analysis for rabbit complete feeds and supplements (all animal classes) as follows:
    - (AA) Minimum percentage of crude protein.
    - (BB) Minimum percentage of crude fat.
    - (CC) Minimum and maximum percentage of crude fiber (the maximum crude fiber shall not exceed the minimum by more than five (5.0) units).
    - (DD) Minimum and maximum percentage of calcium.
    - (EE) Minimum percentage of phosphorus.
    - (FF) Minimum and maximum percentage of salt (if added).
    - (GG) Minimum and maximum percentage of total sodium shall be guaranteed only when total sodium exceeds that furnished by the maximum salt guarantee.
    - (HH) Minimum vitamin A, other than precursors of vitamin A, in International Units per pound (if added).
- (J) The required guarantees of grain mixtures with or without molasses and feeds other than those described in clauses (A) through (I) shall include the following items, unless exempted in clause (K), in the order listed as follows:
- (i) Animal classes and species for which the product is intended.
  - (ii) Guaranteed analysis as follows:
    - (AA) Minimum percentage crude protein.
    - (BB) Maximum or minimum percentage of equivalent crude protein from nonprotein nitrogen as required in section 4(e) of this rule.
    - (CC) Minimum percentage of crude fat.
    - (DD) Maximum percentage of crude fiber.
    - (EE) Minerals in formula feeds, to include in the following order:
      - (aa) Minimum and maximum percentages of calcium.
      - (bb) Minimum percentage of phosphorus.
      - (cc) Minimum and maximum percentage of salt (if added).
      - (dd) Minimum and maximum percentage of total sodium shall be guaranteed only when total sodium exceeds that furnished by the maximum salt guarantee.
      - (ee) Other minerals.
    - (FF) Minerals in feeds ingredients as specified by the official definitions of the Association of American Feed Control Officials.
    - (GG) Vitamins in such terms as specified in section 4(c) of this rule.
    - (HH) Total sugars as invert on dried molasses products or products being sold primarily for their sugar content.
    - (II) Viable lactic acid producing micro-organisms for use in silages in terms specified in section 4(g) of this rule.
    - (JJ) A commercial feed, for example, vitamin/mineral premix or base mix, intended to provide a specialized nutritional source for use in the manufacture of other feeds, must state its intended purpose and guarantee those nutrients relevant to such stated purpose.
- (K) Exemptions as follows:
- (i) A mineral guarantee for feed, excluding those feeds manufactured as complete feeds and for feed supplements intended to be mixed with grain to produce a complete feed for swine, poultry, fish, and veal and herd milk replacers is not required when the feed or feed ingredient:
    - (AA) is not intended or represented or does not serve as a principal source of that mineral to the animal; or
    - (BB) is intended for nonfood producing animals and contains less than six and five-tenths percent (6.5%) total mineral.
  - (ii) Guarantees for vitamins are not required when the commercial feed is neither formulated for nor represented in any manner as a vitamin supplement.
  - (iii) Guarantees for crude protein, crude fat, and crude fiber are not required when the commercial feed is intended for purposes other than to furnish these substances or they are of minor significance relating to the primary purpose of the product, such

as drug premixes, mineral or vitamin supplements, and molasses.

(iv) Guarantees for micro-organisms are not required when the commercial feed is intended for a purpose other than to furnish these substances or they are of minor significance relating to the primary purpose of the product, and no specific label claims are made.

(v) The indication for animal classes and species is not required on single ingredient products if the ingredient is not intended, represented, or defined for a specific animal class or species.

(vi) Mixtures of whole seeds intended to be fed to wild birds may be labeled showing, by weight percentage, the amount of seed by kind, and a weight designated as "other" that includes weed seed, other crop seed, and inert matter contained in the mixture to total one hundred percent (100%), in lieu of supplying guarantees for minimum crude protein, minimum crude fat, and maximum crude fiber. If the feed contains greater than two and five-tenths percent (2.5%) weed seed by weight, the labeling must include the statement, "Note: This feed contains more than two and five-tenths percent (2.5%) weed seed by weight, printed on the label."

(5) Feed ingredients, collective terms for the grouping of feed ingredients, or appropriate statements as provided under the provisions of Section 6(4) of IC 15-5-13 [IC 15-5-13-6(4)] as follows:

(A) The name of each ingredient as defined in the Official Publication of the Association of American Feed Control Officials, common or usual name, or one approved by the director.

(B) Collective terms for the grouping of feed ingredients as defined in the Official Definitions of Feed Ingredients published in the Official Publication of the Association of American Feed Control Officials in lieu of the individual ingredients, provided that:

(i) when a collective term for a group of ingredients is used on the label, individual ingredients within that group shall not be listed on the label; and

(ii) the manufacturer shall provide the feed control official, upon request, with a list of individual ingredients, within a defined group, that are or have been used at manufacturing facilities distributing in or into the state.

(6) Directions for use and precautionary statements or reference to their location if the detailed feeding directions and precautionary statements required by sections 7 and 8 of this rule appear elsewhere on the label.

(7) Name and principal mailing address of the manufacturer or person responsible for distributing the feed. The principal mailing address shall include the street address, city, state, and zip code; however, the street address may be omitted if it is shown in the current city directory or telephone directory.

(8) Net weight or quantity statement.

(b) The director or the director's agent may request labels or labeling under the following conditions:

(1) When the license applicant is a new firm and the labeling practices of the applicant have not been observed.

(2) When labels or labeling of a licensee have been found to be in violation.

(3) When analytical problems are noted.

(4) When a consumer complaint has been received.

*(State Chemist of the State of Indiana; 355 IAC 6-1-3; filed Apr 4, 2002, 9:26 a.m.: 25 IR 2445)*

#### **355 IAC 6-1-4 Expression of guarantees**

**Authority:** IC 15-5-13-14

**Affected:** IC 15-5-13

Sec. 4. (a) The guarantees for crude protein, equivalent crude protein from nonprotein nitrogen, lysine, methionine, other amino acids, crude fat, crude fiber, and acid detergent fiber shall be in terms of percentage.

(b) Mineral guarantees as follows:

(1) When the calcium, salt, and sodium guarantees are given in the guaranteed analysis, such shall be stated and conform to the following:

(A) When the minimum is below two and five-tenths percent (2.5%), the maximum shall not exceed the minimum by more than five-tenths (0.5) percentage point.

(B) When the minimum is two and five-tenths percent (2.5%) but less than five percent (5.0%), the maximum shall not exceed the minimum by more than one (1) percentage point.

(C) When the minimum is above five percent (5.0%) or greater the maximum shall not exceed the minimum by more than twenty percent (20%) of the minimum and in no case shall the maximum exceed the minimum by more than five (5) percentage points.

(2) When stated, guarantees for minimum and maximum total sodium and salt, minimum potassium, magnesium, sulfur, phosphorus, and maximum fluoride shall be in terms of percentage. Other minimum mineral guarantees shall be stated in parts per million (ppm) when the concentration is less than ten thousand (10,000) ppm and in percentage when the concentration is ten thousand (10,000) ppm (one percent (1%))

or greater.

(3) Products labeled with a quantity statement, for example, tablets, capsules, granules, or liquid, may state mineral guarantees in milligrams per unit, for example, tablets, capsules, granules, or liquids, consistent with the quantity statement and directions for use.

(c) Guarantees for minimum vitamin content of commercial feeds shall be listed in the order specified and stated in milligrams per pound or in units consistent with those employed for the quantity statement unless otherwise specified as follows:

(1) Vitamin A, other than precursors of vitamin A, in International Units per pound.

(2) Vitamin D3, in products offered for poultry feeding, in International Chick Units per pound.

(3) Vitamin D for other uses, International Units per pound.

(4) Vitamin E, in International Units.

(5) Concentrated oils and feed additive premixes containing vitamins A, D, and/or E may, at the option of the distributor be stated in units per gram instead of units per pound.

(6) Vitamin B12, in milligrams or micrograms per pound.

(7) All other vitamin guarantees shall express the vitamin activity in milligrams per pound in terms of the following:

(A) Menadione.

(B) Riboflavin.

(C) D pantothenic acid.

(D) Thiamine.

(E) Niacin.

(F) Vitamin B6.

(G) Folic acid.

(H) Choline.

(I) Biotin.

(J) Inositol.

(K) P-amino benzoic acid.

(L) Ascorbic acid.

(M) Carotene.

(d) Guarantees for drugs shall be stated in terms of percent by weight, except as follows:

(1) Antibiotics, present as less than two thousand (2,000) grams per ton (total) of commercial feed shall be stated in grams per ton of commercial feed.

(2) Antibiotics present at or more than two thousand (2,000) grams per ton (total) of commercial feed, shall be stated in grams per pound of commercial feed.

(3) Labels for commercial feeds containing growth promotion and/or feed efficiency levels of antibiotics, which are to be fed continuously as the sole ration, are not required to make quantitative guarantees, except as specifically noted in the federal Food Additive Regula-

tions for certain antibiotics, wherein, quantitative guarantees are required regardless of the level or purpose of the antibiotic.

(4) The term "milligrams per pound" may be used for drugs or antibiotics in those cases where a dosage is given in milligrams in the feeding direction.

(e) Commercial feeds containing any added nonprotein nitrogen shall be labeled as follows:

(1) The following for ruminants:

(A) Complete feeds, supplements, and concentrates containing added nonprotein nitrogen and containing more than five percent (5%) protein from natural sources shall be guaranteed as crude protein, minimum, \_\_\_\_%. [*sic.*] (This includes not more than \_\_\_\_% [*sic.*] equivalent protein from nonprotein nitrogen.)

(B) Mixed feed concentrates and supplements containing less than five percent (5%) protein from natural sources shall be guaranteed as follows:

(i) Equivalent crude protein from nonprotein.

(ii) Nitrogen, minimum, \_\_\_\_% [*sic.*].

(C) Ingredient sources of nonprotein nitrogen such as urea, diammonium phosphate, ammonium polyphosphate solution, ammoniated rice hulls, or other basic nonprotein nitrogen ingredients defined by the Association of American Feed Control Officials shall be guaranteed as follows:

(i) Nitrogen, minimum, \_\_\_\_% [*sic.*] equivalent crude.

(ii) Protein from nonprotein nitrogen, minimum, \_\_\_\_% [*sic.*].

(2) The following for nonruminants:

(A) Complete feeds, supplements, and concentrates containing crude protein from all forms of nonprotein nitrogen, added as such, shall be labeled as crude protein, minimum \_\_\_\_% [*sic.*]. (This includes not more than \_\_\_\_% [*sic.*] equivalent crude protein that is not nutritionally available to (species of animal for which feed is intended).)

(B) Premixes, concentrates, or supplements intended for nonruminants containing more than one and twenty-five hundredths percent (1.25%) equivalent crude protein from all forms of nonprotein nitrogen, added as such, must contain adequate directions for use and a prominent statement, "WARNING: This feed must be used only in accordance with directions furnished on the label."

(f) Mineral phosphatic materials for feeding purposes shall be labeled with the guarantee for minimum and maximum percentage of calcium (when present), the minimum percentage of phosphorus, and the maximum percentage of fluorine.

(g) Guarantees for microorganisms shall be stated in colony forming units per gram (CFU/g) when directions are for using the product in grams, or in colony forming units per pound (CFU/lb) when directions are for using the product in pounds. A parenthetical statement following the guarantee shall list each species in order of predominance.

(h) Guarantees for enzymes shall be stated in units of enzymatic activity per unit weight or volume, consistent with label directions. The source organism for each type of enzymatic activity shall be specified, such as protease (*Bacillus subtilis*) five and five-tenths (5.5) milligrams amino acids liberated/min./milligram. If two (2) or more sources have the same type of activity, they shall be listed in order of predominance based on the amount of enzymatic activity provided. (*State Chemist of the State of Indiana; 355 IAC 6-1-4; filed Apr 4, 2002, 9:26 a.m.: 25 IR 2450*)

### **355 IAC 6-1-5 Suitability**

**Authority:** IC 15-5-13-14

**Affected:** IC 15-5-13

Sec. 5. (a) The nutritional content of a commercial feed, other than a customer-formula feed, shall be as purported or is represented to possess by its labeling. Such animal feed, its labeling, and intended use must be suitable for the intended purpose of the product.

(b) If the director has reasonable cause to believe a feed is not nutritionally suitable, then the director may request the feed manufacturer to either submit an "Affidavit of Suitability" certifying, or by an alternate procedure certify, the nutritional adequacy of the feed. The Affidavit of Suitability or alternate procedure shall be based on valid scientific evidence. The submission of a completed Affidavit of Suitability shall serve as substantiation of the suitability of the feed.

(c) If an Affidavit of Suitability, or alternative procedure acceptable to the director is not submitted by the feed manufacturer or labeler within thirty (30) days of written notification, the director may deem the feed adulterated under section 7(c) of this rule and order the feed removed from the marketplace.

(d) The Affidavit of Suitability shall contain the following information:

- (1) The feed company's name.
- (2) The feed's product name.
- (3) The name and title of the affiant submitting the document.
- (4) A statement that the affiant has knowledge of the nutritional content of the feed and based on valid scientific evidence the feed is nutritionally adequate for its intended purpose.

(5) Date of submission.

(6) The signature of the affiant notarized by a certified notary public.

(*State Chemist of the State of Indiana; 355 IAC 6-1-5; filed Apr 4, 2002, 9:26 a.m.: 25 IR 2452*)

### **355 IAC 6-1-6 Ingredients**

**Authority:** IC 15-5-13-14

**Affected:** IC 15-5-13

Sec. 6. (a) The name of each ingredient or collective term for the grouping of ingredients, when required to be listed, shall be the name as defined in the Official Definitions of Feed Ingredients as published in the Official Publication of the Association of American Feed Control Officials, the common or usual name, or one approved by the director.

(b) The name of each ingredient must be shown in letters or type of the same size.

(c) No reference to quality or grade of an ingredient shall appear in the ingredient statement of a feed.

(d) The term "dehydrated" may precede the name of any product that has been artificially dried.

(e) A single ingredient product defined by the Association of American Feed Control Officials is not required to have an ingredient statement.

(f) Tentative definitions for ingredients shall not be used until adopted as official, unless no official definition exists or the ingredient has a common accepted name that requires no definition, that is, sugar.

(g) When the word "iodized" is used in connection with a feed ingredient, the feed ingredient shall contain not less than seven-thousandths percent (0.007%) iodine, uniformly distributed. (*State Chemist of the State of Indiana; 355 IAC 6-1-6; filed Apr 4, 2002, 9:26 a.m.: 25 IR 2452*)

### **355 IAC 6-1-7 Directions for use and precautionary statements**

**Authority:** IC 15-5-13-14

**Affected:** IC 15-5-13

Sec. 7. (a) Directions for use and precautionary statements on the labeling of all commercial feeds and custom-mixed feeds containing additives (including drugs, special purpose additives, or nonnutritive additives) shall:

- (1) be adequate to enable safe and effective use for the intended purposes by users with no special knowledge of the purpose and use of such articles; and
- (2) include, but not limited to, all information prescribed by all applicable regulations under the federal Food, Drug, and Cosmetic Act.

(b) Adequate directions for use and precautionary statements are required for feeds containing nonprotein nitrogen as specified in section 8 of this rule.

(c) Adequate directions for use and precautionary statements necessary for safe and effective use are required on commercial feeds distributed to supply particular dietary needs or for supplementing or fortifying the usual diet or ration with any vitamin, mineral, or other dietary nutrient or compound. (*State Chemist of the State of Indiana; 355 IAC 6-1-7; filed Apr 4, 2002, 9:26 a.m.: 25 IR 2452*)

### **355 IAC 6-1-8 Nonprotein nitrogen**

**Authority:** IC 15-5-13-14

**Affected:** IC 15-5-13

Sec. 8. (a) Urea and other nonprotein nitrogen products defined in the official publication of the Association of American Feed Control Officials are acceptable ingredients only in commercial feeds for ruminant animals as a source of equivalent crude protein. If the commercial feed contains more than eight and seventy-five hundredths percent (8.75%) of the equivalent crude protein from all forms of nonprotein nitrogen, added as such, or the equivalent crude protein from all forms of nonprotein nitrogen, added as such, exceeds one-third ( $\frac{1}{3}$ ) of the total crude protein, the label shall bear adequate directions for safe use of feeds and a precautionary statement, "CAUTION: USE AS DIRECTED". The directions for use and the caution statement shall be in type of such size so placed on the label that they will be read and understood by ordinary persons under customary conditions of purchase and use.

(b) Nonprotein nitrogen defined in the official publication of the Association of American Feed Control Officials, when so indicated, are acceptable ingredients in commercial feeds distributed as feed for nonruminant animals as a source of nutrients other than equivalent crude protein. The maximum equivalent crude protein from nonprotein nitrogen sources when used in nonruminant rations shall not exceed one and twenty-five hundredths percent (1.25%) of the total daily ration.

(c) On labels such as those for medicated feeds which bear adequate feeding directions and/or warning statements, the presence of added nonprotein nitrogen shall not require a duplication of the feeding directions or the precautionary statements as long as those statements include sufficient information to ensure the safe and effective use of this product due to the presence of nonprotein nitrogen. (*State Chemist of the State of Indiana; 355 IAC 6-1-8; filed Apr 4, 2002, 9:26 a.m.: 25 IR 2453*)

### **355 IAC 6-1-9 Drug and feed additives**

**Authority:** IC 15-5-13-14

**Affected:** IC 15-5-13

Sec. 9. (a) A labeler of a commercial feed that contains additives (including drugs, other special purpose additives, or nonnutritive additives) may be required to submit evidence to prove the safety and efficacy of the commercial feed when used according to the directions furnished on the label.

(b) Satisfactory evidence of safety and efficacy of a commercial feed may be any of the following:

(1) When the commercial feed contains such additives, the use of which conforms to the requirements of the applicable regulation in 21 CFR, or are prior sanctioned, informal review sanctioned, or generally recognized as safe for such use.

(2) When the commercial feed is itself a drug as defined in Section 1(7) [*IC 15-5-13-1(7)*] and is generally recognized as safe and effective for the labeled use or is marketed subject to an application approved by the Food and Drug Administration under 21 U.S.C. 360(b).

(3) When one (1) of the purposes for feeding a commercial feed is to impart immunity (that is to act through some immunological process) the constituents imparting immunity have been approved for that purpose through the federal Virus, Serum, and Toxins Act of 1913, as amended.

(4) When the commercial feed is a direct fed microbial product, including the following:

(A) The product meets the particular fermentation product definition.

(B) The microbial content statement, as expressed in the labeling, is limited to the statement, "Contains a source of live (viable) naturally occurring microorganisms.". This statement shall appear on the label.

(C) The source is stated with a corresponding guarantee expressed in accordance with section 4 of this rule.

(5) When the commercial feed is an enzyme product, including the following:

(A) The product meets the particular enzyme definition defined by the Association of American Feed Control Officials.

(B) The enzyme is stated with a corresponding guarantee expressed in accordance with section 4 of this rule.

(*State Chemist of the State of Indiana; 355 IAC 6-1-9; filed Apr 4, 2002, 9:26 a.m.: 25 IR 2453*)

### **355 IAC 6-1-10 Adulterants**

**Authority:** IC 15-5-13-14

**Affected:** IC 15-5-13-9

Sec. 10. (a) For the purpose of Section 9 of the Act [IC 15-5-13-9], "poisonous or deleterious substances" includes, but is not limited to, the following:

(1) Fluorine and any mineral or mineral mixture that is to be used directly for the feeding of domestic animals and in which the fluorine exceeds the following:

(A) Twenty-hundredths percent (0.20%) for breeding and dairy cattle.

(B) Thirty-hundredths percent (0.30%) for slaughter cattle.

(C) Thirty-hundredths percent (0.30%) for sheep.

(D) Forty-five hundredths percent (0.45%) for swine.

(E) Sixty-hundredths percent (0.60%) for poultry.

(2) Fluorine bearing ingredients when used in such amounts that they raise the fluorine content of the total ration (exclusive of roughage) above the following amounts:

(A) Four-thousandths percent (0.004%) for breeding and dairy cattle.

(B) Nine-thousandths percent (0.009%) for slaughter cattle.

(C) Six-thousandths percent (0.006%) for sheep.

(D) One-hundredth percent (0.01%) for lambs.

(E) Fifteen-thousandths percent (0.015%) for swine.

(F) Three-hundredths percent (0.03%) for poultry.

(3) Fluorine bearing ingredients incorporated in any feed that is fed directly to cattle, sheep, or goats consuming roughage (with or without) limited amounts of grain, that results in a daily fluorine intake in excess of fifty (50) milligrams of fluorine per one hundred (100) pounds of body weight.

(4) Soybean meal, flakes, or pellets or other vegetable meals, flakes, or pellets that have been extracted with trichlorethylene or other chlorinated solvents.

(5) Sulfur dioxide, sulfurous acid, and salts of sulfurous acid when used in or on feeds or feed ingredients that are considered or reported to be a significant source of vitamin B1 (thiamine).

(b) All screenings or byproducts of grains, and seeds containing weed seeds, when used in commercial feed or sold as such to the ultimate consumer, shall be ground fine enough or otherwise treated to destroy the viability of such weed seeds so that the finished product contains no viable prohibited noxious weed seeds, not more than fifty (50) viable restricted noxious weed seeds per pound, and not more than one hundred (100) per pound of other viable weed seeds. (*State Chemist of the State of Indiana; 355 IAC 6-1-10; filed Apr 4, 2002, 9:26 a.m.: 25 IR 2454*)

### **355 IAC 6-1-11 Good manufacturing practices**

**Authority:** IC 15-5-13-14

**Affected:** IC 15-5-13-9

Sec. 11. For the purpose of enforcement of IC 15-5-13-9(9), the director adopts the following as current good manufacturing practices:

(1) The regulations prescribing good manufacturing practices for Type B and Type C medicated feeds as published in 21 CFR 225.

(2) The regulations prescribing good manufacturing practices for Type A medicated articles as published in 21 CFR 226.

(*State Chemist of the State of Indiana; 355 IAC 6-1-11; filed Apr 4, 2002, 9:26 a.m.: 25 IR 2454; errata filed April 8, 2002, 11:15 a.m.: 25 IR 2521*)

### **355 IAC 6-1-12 Payment of inspection fee; interstate exclusion**

**Authority:** IC 15-5-13-14

**Affected:** IC 15-5-13-11; IC 15-5-13-12

Sec. 12. Manufacturers and distributors located in Indiana who furnish substantial quantities of commercial feeds to customers in other states may apply to the director for interstate exclusion status. When so designated, the following conditions apply:

(1) Those distributors shall not be charged the inspection fee by the supplier on commercial feeds purchased from any supplier.

(2) Those distributors shall report and pay the inspection fee on all commercial feeds they distribute in Indiana each quarter including feeds they distribute under another distributor's label.

(3) No credit may be claimed on the quarterly report for payment of the inspection fee to another distributor.

(4) A list of parties designated with interstate exclusion status will be maintained and provided by the director.

(*State Chemist of the State of Indiana; 355 IAC 6-1-12; filed Apr 4, 2002, 9:26 a.m.: 25 IR 2454*)

### **355 IAC 6-1-13 Indiana commercial feed license**

**Authority:** IC 15-5-13-14

**Affected:** IC 15-5-13-3.5

Sec. 13. The application for Indiana commercial feed license shall be on forms provided by the director or forms reproduced locally by the applicant that has all the following information and in the following general order:

(1) Name, complete mailing address, and physical location of the applicant.

(2) Telephone number, FAX number, and e-mail

addresses, if applicable.

(3) A list of subsidiaries located in Indiana or any out-of-state subsidiaries who distribute directly into Indiana.

(4) A designation whether the applicant manufactures or distributes commercial feeds under their label in or into Indiana.

(5) A designation whether the applicant manufactures or distributes pet foods or specialty pet foods in containers of ten (10) pounds or less or containers exceeding ten (10) pounds or bulk.

(6) A designation if the manufacturer is located in Indiana and manufactures only custom-mixed feeds.

(7) The printed name and title of the person who is the contact person for the applicant.

(8) The signature of the applicant.

*(State Chemist of the State of Indiana; 355 IAC 6-1-13; filed Apr 4, 2002, 9:26 a.m.: 25 IR 2454)*

### **Rule 2. Pet Food**

355 IAC 6-2-1	Definitions and terms
355 IAC 6-2-2	Label format and labeling
355 IAC 6-2-3	Brand and product names
355 IAC 6-2-4	Expression of guarantees
355 IAC 6-2-5	Ingredients
355 IAC 6-2-6	Drugs and pet food additives
355 IAC 6-2-7	Nutritional adequacy
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355 IAC 6-2-9	Statements of calorie content
355 IAC 6-2-10	Descriptive terms
355 IAC 6-2-11	Manufacturer or distributor; name and address

### **355 IAC 6-2-1 Definitions and terms**

**Authority:** IC 15-5-13-14

**Affected:** IC 15-5-13-1

Sec. 1. The definitions in IC 15-5-13 shall apply throughout this rule in addition to the following:

(1) "All life stages" means gestation/lactation, growth, and adult maintenance life stages.

(2) "Family" means a group of products, which are nutritionally adequate for any or all life stages based on their nutritional similarity to a lead product, that has been successfully test-fed according to an AAFCO feeding protocol.

(3) "Immediate container" means the unit, can, box, tin, bag, or other receptacle or covering in which a pet food or specialty pet food is displayed for sale to retail purchasers, but does not include containers used as shipping containers.

(4) "Ingredient statement" means a collective and contiguous listing on the label of the ingredients of which the pet food or specialty pet food is composed.

(5) "Principal display panel" means the part of a label that is most likely to be displayed, presented, shown, or examined under normal and customary conditions of display for retail sale.

*(State Chemist of the State of Indiana; 355 IAC 6-2-1; filed Apr 4, 2002, 9:26 a.m.: 25 IR 2455)*

### **355 IAC 6-2-2 Label format and labeling**

**Authority:** IC 15-5-13-14

**Affected:** IC 15-5-13-6; IC 15-5-13-8

Sec. 2. (a) Pet food and specialty pet food shall be labeled with the following information prescribed in this section:

(1) Product name and brand name, if any, on the principal display panel as stipulated in section 3 of this rule.

(2) The species of pet or specialty pet for which the food is intended conspicuously designated on the principal display panel.

(3) Quantity statement, as defined in Section 6(1) of IC 15-5-13 [IC 15-5-13-6(1)], on the principal display panel.

(4) Guaranteed analysis as stipulated in section 4 of this rule.

(5) Ingredient statement as stipulated in section 5(a) of this rule.

(6) A statement of nutritional adequacy or purpose if required under section 7 of this rule.

(7) Feeding directions if required under section 8 of this rule.

(8) Name and address of the manufacturer or distributor as stipulated in section 11 of this rule.

(b) When a pet food or specialty pet food enclosed in an outer container or wrapper is intended for retail sale, all required label information shall appear on the outer container or wrapper.

(c) A vignette, graphic, or pictorial representation on a pet food or specialty pet food label shall not misrepresent the contents of the package.

(d) The use of the word "proven" in connection with a label claim for a pet food or specialty pet food is not permitted unless the claim is substantiated by scientific or other empirical evidence.

(e) No statement shall appear upon the label or labeling of a pet food or specialty pet food which makes false or misleading comparisons between that product and any other product.

(f) A personal or commercial endorsement is permitted on a pet food or specialty pet food label provided the endorsement is not false or misleading.

(g) A statement on a pet food or specialty pet food label stating "Improved", "New", or similar designation

shall be substantiated and limited to six (6) months production.

(h) A statement on a pet food or specialty pet food label stating preference or comparative attribute claims shall be substantiated and limited to one (1) year production, after which the claim shall be removed or resubstantiated. (*State Chemist of the State of Indiana; 355 IAC 6-2-2; filed Apr 4, 2002, 9:26 a.m.: 25 IR 2455*)

### 355 IAC 6-2-3 Brand and product names

Authority: IC 15-5-13-14

Affected: IC 15-5-13-6; IC 15-5-13-8

Sec. 3. (a) The words "100%", or "All", or words of similar designation shall not be used in the brand or product name of a pet food or specialty pet food if the product contains more than one (1) ingredient, not including water sufficient for processing, decharacterizing agents, or trace amounts of preservatives and condiments.

(b) An ingredient or a combination of ingredients may form a part of the product name of a pet food or specialty pet food as follows:

(1) When the ingredients derived from animals, poultry, or fish constitutes at least ninety-five percent (95%) of the total weight of the product. Water sufficient for processing may be excluded when calculating the percentage; however, the ingredient shall constitute at least seventy percent (70%) of the total product weight.

(2) When any ingredient constitutes at least twenty-five percent (25%) of the weight of the product, provided the following:

(A) Water sufficient for processing may be excluded when calculating the percentage; however, the ingredients shall constitute at least ten percent (10%) of the total product weight.

(B) A descriptor is used with the ingredient name. This descriptor shall imply other ingredients are included in the product formula. Examples of descriptors include the following:

- (i) Dinner.
- (ii) Platter.
- (iii) Entree.
- (iv) Formula.
- (v) Recipe.

(C) The descriptor shall be in the same size, style, and color print as the ingredient name.

(3) When a combination of ingredients that are included in the product name in accordance with this subsection meets all of the following:

(A) Each ingredient constitutes at least three percent (3%) of the product weight, excluding water sufficient for processing.

cient for processing.

(B) The names of the ingredients appear in the order of their respective predominance by weight in the product.

(C) All such ingredient names appear on the label in the same size, style, and color print.

(c) When the name of any ingredient appears in the product name of a pet food or elsewhere on the product label and includes a descriptor, such as "with" or similar designation, the named ingredients must each constitute at least three percent (3%) of the product weight exclusive of water for processing. If the names of more than one (1) ingredient are shown, they shall appear in their respective order of predominance by weight in the product. The three percent (3%) minimum level shall not apply to claims for nutrients, such as, but not limited to, vitamins, minerals, and fatty acids, as well as condiments. The word "with," or similar designation, and named ingredients shall be in the same size, style, color, and case print and be of no greater size than:

Panel Size	Max "with claim" Type Size
< 5 sq. in.	C"
5–25 sq. in.	¼"
25–100 sq. in.	D"
100–400 sq. in.	½"
400 sq. in. +	1"

(d) A flavor designation may be included as part of the product name or elsewhere on the label of a pet food or specialty pet food when the flavor designation meets all of the following:

(1) The flavor designation:

(A) conforms to the name of the ingredient as listed in the ingredient statement; or

(B) is identified by the source of the flavor in the ingredient statement.

(2) The word "flavor" is printed in the same size type and with an equal degree of conspicuousness as the name of the flavor designation.

(3) Substantiation of the flavor designation, the flavor claim, or the ingredient source is provided upon request.

(e) The product name of the pet food or specialty pet food shall not be derived from one (1) or more ingredients unless all ingredients are included in the name, except as specified by subsection (b) or (c), provided that the name of an ingredient or combination of ingredients may be used as a part of the product name if:

(1) the ingredient or combination of ingredients is present in sufficient quantity to impart a distinctive characteristic to the product or is present in amounts that have a material bearing upon the price of the

product or upon acceptance of the product by the purchaser thereof; or

(2) it does not constitute a representation that the ingredient or combination of ingredients is present to the exclusion of other ingredients.

(f) Contractions or coined names referring to ingredients shall not be used in the brand name of a pet food or specialty pet food unless it is in compliance with subsection (b), (c), or (d). (*State Chemist of the State of Indiana; 355 IAC 6-2-3; filed Apr 4, 2002, 9:26 a.m.: 25 IR 2455*)

### 355 IAC 6-2-4 Expression of guarantees

Authority: IC 15-5-13-14

Affected: IC 15-5-13-6; IC 15-5-13-8

Sec. 4. (a) The guaranteed analysis shall be listed in the following order and format unless otherwise specified in this rule:

(1) A pet food or specialty pet food label shall list the following required guarantees:

(A) Minimum percentage of crude protein.

(B) Minimum percentage of crude fat.

(C) Maximum percentage of crude fat, if required by section 10 of this rule.

(D) Maximum percentage of crude fiber.

(E) Maximum percentage of moisture.

(F) Additional guarantees shall follow moisture.

(2) When ash is listed in the guaranteed analysis on a pet food or specialty pet food label, it shall be guaranteed as a maximum percentage and shall immediately follow moisture.

(3) A dog or cat food label shall list other required or voluntary guarantees in the same order and units of the nutrients in the AAFCO dog (or cat) food nutrient profiles. Guarantees for substances not listed in the AAFCO dog (or cat) food nutrient profiles, or not otherwise provided for in this rule, shall immediately follow the listing of the recognized nutrients and shall be accompanied by an asterisk referring to the disclaimer "Not recognized as an essential nutrient by the AAFCO dog (or cat) food nutrient profiles.". The disclaimer shall appear immediately after the last such guarantee in the same size type as the guarantees.

(4) A specialty pet food label shall list other required or voluntary guarantees as required by 355 IAC 6-1-3-4(J) [*355 IAC 6-1-3(a)(4)(J)*].

(b) The sliding scale method of expressing a guaranteed analysis on a pet food or specialty pet food label (for example, "Minimum crude protein 15-18%") is prohibited.

(c) The label of a pet food or a specialty pet food that is formulated as and represented to be a mineral supple-

ment shall include minimum guarantees for all minerals from sources declared in the ingredient statement:

(1) established by an AAFCO-recognized nutrient profile, expressed as the element in units specified in the nutrient profile; or

(2) expressed as the element in units specified in 355 IAC 6-1-3-4(b) [*355 IAC 6-1-4(b)*] when no species-specific nutrient profile has been recognized by AAFCO;

and provided that mineral guarantees required by subdivisions (1) and (2) may be expressed in milligrams per unit, for example, tablets, capsules, granules, or liquids, consistent with those employed in the quantity statement and directions for use, and a weight equivalent, for example, one (1) fluid ounce equals twenty-eight (28) grams, for liquid products.

(d) The label of a pet food or a specialty pet food that is formulated as and represented to be a vitamin supplement shall include minimum guarantees for all vitamins from sources declared in the ingredient statement:

(1) established by an AAFCO-recognized nutrient profile, expressed in units specified in the nutrient profile; or

(2) expressed in units specified in 355 IAC 6-1-3-4(c) [*355 IAC 6-1-4(c)*] when no species-specific nutrient profile has been recognized by AAFCO;

and provided that vitamin guarantees required by this subsection may be expressed in approved units, for example, IU, mg, g, per unit, for example, tablets, capsules, granules, or liquids, consistent with those employed in the quantity statement and directions for use, and a weight equivalent, for example, one (1) fluid ounce equals twenty-eight (28) grams, for liquid products.

(e) When the label of a pet food or specialty pet food includes a comparison of the nutrient content of the food with levels established by an AAFCO-recognized nutrient profile, such as a table of comparison, a percentage, or any other designation referring to an individual nutrient or all of the nutrient levels, the following apply:

(1) The product shall meet the AAFCO-recognized nutrient profile.

(2) The statement of comparison shall be preceded by a statement that the product meets the AAFCO-recognized profile; however, the statement that the product meets the AAFCO-recognized nutrient profile is not required provided that the nutritional adequacy statement as per section 7(a)(1) or 7(b)(2)(A) of this rule appears elsewhere on the product label.

(3) The statement of comparison of the nutrient content shall constitute a guarantee, but need not be repeated in the guaranteed analysis.

(4) The statement of comparison may appear on the

label separate and apart from the guaranteed analysis.

(f) The maximum moisture declared on a pet food or specialty pet food label shall not exceed seventy-eight percent (78.00%) or the natural moisture content of the ingredients, whichever is higher. However, pet food and specialty pet food, such as, but not limited to, those consisting principally of stew, gravy, sauce, broth, aspic, juice, or a milk replacer, and that are so labeled, may contain moisture in excess of seventy-eight percent (78.00%).

(g) Guarantees for crude protein, crude fat, and crude fiber are not required when the pet food or specialty pet food is intended for purposes other than to furnish these substances or they are of minor significance relative to the primary purpose of the product, such as a mineral or vitamin supplement.

(h) Guarantees for micro-organisms and enzymes shall be stated in the format as stipulated in 355 IAC 6-1-3-4(g) and (h) [355 IAC 6-1-4(g) and 355 IAC 6-1-4(h)]. (*State Chemist of the State of Indiana; 355 IAC 6-2-4; filed Apr 4, 2002, 9:26 a.m.: 25 IR 2456*)

### 355 IAC 6-2-5 Ingredients

**Authority:** IC 15-5-13-14

**Affected:** IC 15-5-13-6; IC 15-5-13-8

Sec. 5. (a) Each ingredient of a pet food or specialty pet food shall be listed in the ingredient statement as follows:

- (1) The names of all ingredients in the ingredient statement shall be shown in letters or type of the same size.
- (2) The ingredients shall be listed in descending order by their predominance by weight in nonquantitative terms.
- (3) Ingredients shall be listed and identified by the name and definition established by AAFCO.
- (4) Any ingredient for which no name and definition have been so established shall be identified by the common or usual name of the ingredient.

(b) The ingredients "meat" or "meat byproducts" shall be qualified to designate the animal from which the meat or meat byproducts are derived unless the meat or meat byproducts are derived from cattle, swine, sheep, goats, or any combination thereof. For example, ingredients derived from horses shall be listed as "horsemeat" or "horsemeat byproducts".

(c) Brand or trade names shall not be used in the ingredient statement.

(d) A reference to the quality, nature, form, or other attribute of an ingredient shall be allowed when the reference meets the following:

- (1) The designation is not false or misleading.

(2) The ingredient imparts a distinctive characteristic to the pet food or specialty pet food because it possesses that attribute.

(e) A reference to quality or grade of the ingredient does not appear in the ingredient statement. (*State Chemist of the State of Indiana; 355 IAC 6-2-5; filed Apr 4, 2002, 9:26 a.m.: 25 IR 2457*)

### 355 IAC 6-2-6 Drugs and pet food additives

**Authority:** IC 15-5-13-14

**Affected:** IC 15-5-13-1

Sec. 6. (a) An artificial color may be used in a pet food or specialty pet food only if it has been shown to be harmless to pets or specialty pets. The permanent or provisional listing of an artificial color in the United States Food and Drug regulations as safe for use, together with the conditions, limitations, and tolerances, if any, incorporated therein, shall be deemed to be satisfactory evidence that the color is, when used pursuant to such regulations, harmless to pets or specialty pets.

(b) Evidence may be required to prove the safety and efficacy or utility of a pet food or specialty pet food which contains additives or drugs, when used according to directions furnished on the label. Satisfactory evidence of the safety and efficacy of a pet food or specialty pet food may be established when the pet food or specialty pet food:

(1) contains such additives, the use of which conforms to the requirements of the applicable regulation in 21 CFR, or are "prior sanctioned" or "Generally Recognized as Safe" for such use; or

(2) itself is a drug or contains a drug as defined in IC 15-5-13-1-7 [IC 15-5-13-1(7)] and is "generally recognized as safe and effective" for the labeled use or is marketed subject to an application approved by the Food and Drug Administration under 21 U.S.C. 360(b).

(c) When a drug is included in a pet food or specialty pet food, the format required by 355 IAC 6-1-3(a)(2) for labeling medicated feeds shall be used. (*State Chemist of the State of Indiana; 355 IAC 6-2-6; filed Apr 4, 2002, 9:26 a.m.: 25 IR 2458; errata filed April 8, 2002, 11:15 a.m.: 25 IR 2521*)

### 355 IAC 6-2-7 Nutritional adequacy

**Authority:** IC 15-5-13-14

**Affected:** IC 15-5-13-6

Sec. 7. (a) The label of a pet food or specialty pet food that is intended for all life stages of the pet or specialty pet may include an unqualified claim, directly or indirectly, such as "complete and balanced", "perfect",

“scientific”, or “100% nutritious” if at least one (1) of the following apply:

- (1) The product meets the nutrient requirements for all life stages established by an AAFCO-recognized nutrient profile.
  - (2) The product meets the criteria for all life stages as substantiated by completion of the appropriate AAFCO-recognized animal feeding protocol.
  - (3) The product is a member of a product family that is nutritionally similar to a lead product that contains a combination of ingredients that has been fed to a normal animal as the sole source of nourishment in accordance with the testing procedures established by AAFCO for all life stages, provided the following:
    - (A) The nutritional similarity of the family product can be substantiated according to the Procedures for Establishing Pet Food Product Families developed by AAFCO.
    - (B) The family product meets the criteria for all life stages.
    - (C) Under circumstances of reasonable doubt, the director may require the manufacturer to perform additional testing of the family product in order to substantiate the claim of nutritional adequacy.
- (b) The label of a pet food or specialty pet food that is intended for a limited purpose or a specific life stage, but not for all life stages, may include a qualified claim, such as “complete and balanced”, “perfect”, “scientific”, or “100% nutritious” when the product and claim meets all of the following:
- (1) The claim is qualified with a statement of the limited purpose or specific life stage for which the product is intended or suitable, for example, “complete and balanced for puppies (or kittens)”. The claim and the required qualification shall be juxtaposed on the same label panel and in the same size, style, and color print.
  - (2) The product meets at least one (1) of the following:
    - (A) The nutrient requirements for the limited purpose or specific life stage established by an AAFCO-recognized nutrient profile.
    - (B) The criteria for a limited purpose or a specific life stage as substantiated by completion of the appropriate AAFCO-recognized animal feeding protocol.
    - (C) The requirements of a product family which is nutritionally similar to a lead product which contains a combination of ingredients that, when fed for such limited purpose, will satisfy the nutrient requirements for such limited purpose and has had its capabilities in this regard demonstrated by adequate testing, and provided the following:
      - (i) The nutritional similarity of the family product

can be substantiated according to the Procedures for Establishing Pet Food Product Families developed by AAFCO.

- (ii) The family product meets the criteria for such limited purpose.
  - (iii) Under circumstances of reasonable doubt, the director may require the manufacturer to perform additional testing for the family product to substantiate the claim of nutritional adequacy.
- (c) Dog and cat food labels shall include a statement of nutritional adequacy or purpose of the product, except when the dog or cat food is clearly and conspicuously identified on the principal display panel as a “snack” or “treat”. The statement shall consist of one (1) of the following:
- (1) A claim that the dog or cat food meets the requirements of one (1) or more of the recognized categories of nutritional adequacy, gestation/lactation, growth, maintenance, and all life stages. The claim shall be stated verbatim as one (1) of the following:
    - (A) “(Name of product) is formulated to meet the nutritional levels established by the AAFCO Dog (or Cat) Food Nutrient Profiles for \_\_\_\_\_.” (Blank is to be completed by using the stage or stages of the pet’s life, such as gestation/lactation, growth, maintenance, or the words “All Life Stages”).
    - (B) “Animal feeding tests using AAFCO procedures substantiate that (Name of Product) provides complete and balanced nutrition for \_\_\_\_\_.” (Blank is to be completed by using the stage or stages of the pet’s life tested, such as gestation/lactation, growth, maintenance, or the words “All Life Stages”).
    - (C) “(Name of Product) provides complete and balanced nutrition for \_\_\_\_\_ (Blank is to be completed by using the stage or stages of the pet’s life, such as gestation, lactation, growth, maintenance, or the words “All Life Stages”) and is comparable in nutritional adequacy to a product which has been substantiated using AAFCO feeding tests.”
  - (2) A nutritional or dietary claim for purposes other than those listed in subsection (a) or (b) if the claim is scientifically substantiated.
  - (3) The statement, “This product is intended for intermittent or supplemental feeding only”, if a product does not meet the requirements of subsection (a) or (b) or any other special nutritional or dietary need and so is suitable only for limited or intermittent or supplementary feeding.
  - (d) A product intended for use by, or under the supervision or direction of a veterinarian shall make a statement in accordance with subsection (c)(1) or (c)(3).
  - (e) A signed affidavit attesting that the product meets the requirements of subsection (a) or (b)(2) shall be

submitted to the director upon request.

(f) If the nutrient content of a product does not meet those nutrient requirements established by an AAFCO-recognized nutrient profile, or if no requirement has been established by an AAFCO recognized nutritional authority for the life stages of the intended species, the claimed nutritional adequacy or purpose of the product shall be scientifically substantiated.

(g) The following AAFCO-recognized nutritional authority, nutrient profile, and/or animal feeding protocol shall be acceptable as the basis for a claim of nutritional adequacy as an AAFCO-recognized nutrient profile or nutritional authority for:

- (1) Dogs, the AAFCO dog food nutrient profiles.
- (2) Cats, the AAFCO cat food nutrient profiles.
- (3) Specialty pets, the nutrient recommendations approved by the Committee on Animal Nutrition of the National Research Council of the National Academy of Sciences, provided that this nutrient recommendation is recognized only for the specific specialty pet for which the profile is intended.
- (4) As an AAFCO-recognized animal feeding protocol, the AAFCO Dog and Cat Food Feeding Protocols.

(*State Chemist of the State of Indiana; 355 IAC 6-2-7; filed Apr 4, 2002, 9:26 a.m.: 25 IR 2458*)

### 355 IAC 6-2-8 Feeding directions

**Authority:** IC 15-5-13-14

**Affected:** IC 15-5-13-6; IC 15-5-13-8

Sec. 8. (a) Dog or cat food, including snacks or treats, labeled as complete and balanced for any or all life stages, as provided in section 7(c)(1) of this rule, except those pet foods labeled in accordance with section 7(d) of this rule, shall list feeding directions on the product label. These directions shall be consistent with the intended use indicated in the nutritional adequacy statement unless a limited use or more limited life stage designation is declared elsewhere, for example, adult formula. These directions shall be expressed in common terms and shall appear prominently on the label. Feeding directions shall, at a minimum, state, "Feed (weight/unit of product) per (weight only) of dog (or cat)". The frequency of feeding shall also be specified.

(b) When a dog or cat food is intended for use by or under the supervision or direction of a veterinarian, the statement, "Use only as directed by your veterinarian" may be used in lieu of feeding directions.

(c) Specialty pet food, including snacks or treats, labeled as complete and balanced for any or all life stages, as provided in section 7(a) of this rule, shall list feeding directions on the product label. These feeding directions shall be adequate to meet the nutrient require-

ments of the intended species of specialty pet as recommended by the AAFCO-recognized nutritional authority. These directions shall be expressed in common terms and shall appear prominently on the label. The frequency of feeding shall also be specified. (*State Chemist of the State of Indiana; 355 IAC 6-2-8; filed Apr 4, 2002, 9:26 a.m.: 25 IR 2459*)

### 355 IAC 6-2-9 Statements of calorie content

**Authority:** IC 15-5-13-14

**Affected:** IC 15-5-13-6; IC 15-5-13-8

Sec. 9. (a) Except as required in section 10 of this rule, the label of a dog or cat food may bear a statement of calorie content when the label meets all of the following:

(1) The statement shall be separate and distinct from the "Guaranteed Analysis" and shall appear under the heading "Calorie Content".

(2) The statement shall be measured in terms of metabolizable energy (ME) on an as-fed basis and must be expressed as kilocalories per kilogram (kcal/kg) of product, and may also be expressed as kilocalories per familiar household measure, for example, cans, cups, and pounds.

(3) The calorie content is determined by one (1) of the following methods:

(A) By calculation using the following modified Atwater formula:

$$ME(kcal/kg) = 10[(3.5 \times CP) + (8.5 \times CF) + (3.5 \times NFE)]$$

Where: ME = Metabolizable energy.

CP = % crude protein as-fed.

CF = % crude fat as-fed.

NFE = % nitrogen-free extract (carbohydrate) as-fed.

The percentages of CP and CF are the arithmetic averages from proximate analyses of at least four (4) production batches of the product, and the NFE is calculated as the difference between one hundred (100) and the sum of CP, CF, and the percentages of crude fiber, moisture, and ash (determined in the same manner as CP and CF).

(B) In accordance with a testing procedure established by AAFCO.

(4) An affidavit shall be provided upon request to the director, substantiating that the calorie content was determined by either of the following:

(A) Subdivision (3)(A), in which case the results of all the analyses used in the calculation shall accompany the affidavit.

(B) Subdivision (3)(B), in which case the summary data used in the determination of calorie content shall accompany the affidavit.

(5) The calorie content statement shall appear as one (1) of the following:

(A) The claim on the label or other labeling shall be followed parenthetically by the word “calculated” when the calorie content is determined in accordance with subdivision (3)(A).

(B) The value of calorie content stated on the label that is determined in accordance with subdivision (3)(B) shall not exceed or understate the value determined in accordance with subdivision (3)(A) by more than fifteen percent (15%).

(b) Comparative claims shall not be false, misleading, or given undue emphasis and shall be based on the same methodology for the products compared. (*State Chemist of the State of Indiana; 355 IAC 6-2-9; filed Apr 4, 2002, 9:26 a.m.: 25 IR 2460; errata filed April 8, 2002, 11:15 a.m.: 25 IR 2521*)

### 355 IAC 6-2-10 Descriptive terms

**Authority:** IC 15-5-13-14

**Affected:** IC 15-5-13-6; IC 15-5-13-8

Sec. 10. (a) The following are requirements for calorie terms:

(1) “Light” requirements are as follows:

(A) A dog food product that bears on its label the terms “light”, “lite”, “low calorie”, or words of similar designation shall:

(i) contain no more than three thousand one hundred (3,100) kcal ME/kg for products containing less than twenty percent (20%) moisture, no more than two thousand five hundred (2,500) kcal ME/kg for products containing twenty percent (20%) or more but less than sixty-five percent (65%) moisture, and no more than nine hundred (900) kcal ME/kg for products containing sixty-five percent (65%) or more moisture;

(ii) include on the label a calorie content statement:  
(AA) in accordance with the format provided in section 9 of this rule; and

(BB) that states no more than three thousand one hundred (3,100) kcal ME/kg for products containing less than twenty percent (20%) moisture, no more than two thousand five hundred (2,500) kcal ME/kg for products containing twenty percent (20%) or more but less than sixty-five percent (65%) moisture, and no more than nine hundred (900) kcal ME/kg for products containing sixty-five percent (65%) or more moisture; and

(iii) include on the label feeding directions that reflect a reduction in calorie intake consistent with the intended use.

(B) A cat food product that bears on its label the terms “light”, “lite”, “low calorie”, or words of similar designation shall:

(i) contain no more than three thousand two hundred fifty (3,250) kcal ME/kg for products containing less than twenty percent (20%) moisture, no more than two thousand six hundred fifty (2,650) kcal ME/kg for products containing twenty percent (20%) or more but less than sixty-five percent (65%) moisture, and no more than nine hundred fifty (950) kcal ME/kg for products containing sixty-five percent (65%) or more moisture; and

(ii) include on the label a calorie content statement:

(AA) in accordance with the format provided in section 9 of this rule; and

(BB) that states no more than three thousand two hundred fifty (3,250) kcal ME/kg for products containing less than twenty percent (20%) moisture, no more than two thousand six hundred fifty (2,650) kcal ME/kg for products containing twenty percent (20%) or more but less than sixty-five percent (65%) moisture, and no more than nine hundred fifty (950) kcal ME/kg for products containing sixty-five percent (65%) or more moisture; and

(iii) include on the label feeding directions which reflect a reduction in calorie intake consistent with the intended use.

(2) “Less” or “reduced calories” requirements are as follows:

(A) A dog or cat food product that bears on its label a claim of “less calories”, “reduced calories”, or words of similar designation, shall include the following on the label:

(i) The name of the product of comparison and the percentage of calorie reduction (expressed on an equal weight basis) explicitly stated and juxtaposed with the largest or most prominent use of the claim on each panel of the label where the term appears.

(ii) The comparative statement printed in type of the same color and style and at least half the type size used in the claim.

(iii) A calorie content statement in accordance with the format provided in section 9 of this rule.

(iv) Feeding directions that reflect a reduction in calories compared to feeding directions for the product of comparison.

(B) A comparison between products in different categories of moisture content, that is, less than twenty percent (20%), twenty percent (20%) or more but less than sixty-five percent (65%), sixty-five percent (65%) or more, is misleading.

(b) The following are requirements for fat terms:

## (1) "Lean" requirements are as follows:

(A) A dog food product that bears on its label the terms "lean", "low fat", or words of similar designation shall:

(i) contain no more than nine percent (9%) crude fat for products containing less than twenty percent (20%) moisture, no more than seven percent (7%) crude fat for products containing twenty percent (20%) or more but less than sixty-five percent (65%) moisture, and no more than four percent (4%) crude fat for products containing sixty-five percent (65%) or more moisture; and

(ii) include on the product label in the guaranteed analysis a maximum crude fat guarantee:

(AA) immediately following the minimum crude fat guarantee in addition to the mandatory guaranteed analysis information as specified in section 4(a)(1) of this rule; and

(BB) that is no more than nine percent (9%) crude fat for products containing less than twenty percent (20%) moisture, no more than seven percent (7%) crude fat for products containing twenty percent (20%) or more but less than sixty-five percent (65%) moisture, and no more than four percent (4%) crude fat for products containing sixty-five percent (65%) or more moisture.

(B) A cat food product that bears on its label the terms "lean", "low fat", or words of similar designation shall:

(i) contain a maximum percentage of crude fat which is no more than ten percent (10%) crude fat for products containing less than twenty percent (20%) moisture, no more than eight percent (8%) crude fat for products containing twenty percent (20%) or more but less than sixty-five percent (65%) moisture, and no more than five percent (5%) crude fat for products containing sixty-five percent (65%) or more moisture; and

(ii) include on the product label in the guaranteed analysis a maximum crude fat guarantee:

(AA) immediately following the minimum crude fat guarantee in addition to the mandatory guaranteed analysis information as specified in section 4(a)(1) of this rule; and

(BB) that is no more than ten percent (10%) crude fat for products containing less than twenty percent (20%) moisture, no more than eight percent (8%) crude fat for products containing twenty percent (20%) or more but less

than sixty-five percent (65%) moisture, and no more than five percent (5%) crude fat for products containing sixty-five percent (65%) or more moisture.

(2) "Less" or "reduced fat" requirements for a dog or cat food product that bears on its label a claim of "less fat", "reduced fat", or words of similar designation, shall include the following on the label:

(A) The name of the product of comparison and the percentage of fat reduction (expressed on an equal weight basis) explicitly stated and juxtaposed with the largest or most prominent use of the claim on each panel of the label on where the term appears.

(B) The comparative statement printed in type of the same color and style and at least half the type size used in the claim.

(C) A maximum crude fat guarantee in the guaranteed analysis immediately following the minimum crude fat guarantee in addition to the mandatory guaranteed analysis information as specified in section 4(a)(1) of this rule.

(c) A comparison on the label between products in different categories of moisture content, that is, less than twenty percent (20%), twenty percent (20%) or more but less than sixty-five percent (65%), sixty-five percent (65%) or more, is misleading. (*State Chemist of the State of Indiana; 355 IAC 6-2-10; filed Apr 4, 2002, 9:26 a.m.: 25 IR 2460*)

### 355 IAC 6-2-11 Manufacturer or distributor; name and address

**Authority:** IC 15-5-13-14

**Affected:** IC 15-5-13-6

Sec. 11. (a) The label of a pet food or specialty pet food shall specify the name and address of the manufacturer or distributor. The statement of the place of business shall include the street address, city, state, and zip code; however, the street address may be omitted if such street address is shown in a current city directory or telephone directory for the city listed on the label.

(b) When a person manufactures or distributes a pet food or specialty pet food in a place other than the principal place of business, the label may state the principal place of business in lieu of the actual place where each package of such pet food or specialty pet food was manufactured or package or from where each package is to be distributed. (*State Chemist of the State of Indiana; 355 IAC 6-2-11; filed Apr 4, 2002, 9:26 a.m.: 25 IR 2462*)